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WARNINGS



Safety instructions and warnings are asserted in this section. Read the instructions thoroughly before use and inform third parties of potential risks. Failure to comply with these instructions may result in permanent bodily and property damage and in any case in immediate expiry of the manufacturer's warranty.

Drowning hazard

- Heat intensifies the effect of alcohol, drugs or medication and can lead to unconsciousness.
- Avoid temporary immersion or excessive swallowing of the water. It is not suitable for consumption.
- Do not leave children or persons with motor or mental impairment unattended.
- Use suitable stairs to enter or exit and be careful of slippery surfaces.
- Remain seated or lying down during operation and avoid abrupt and rapid movements.
- If you experience pain or dizziness while using the whirlpool, leave the pool and consult a doctor.
- The jets generate a flow of water at high pressure. Exposure to the body for too long can cause bruising.
- Set yourself a reasonable time limit. Using hot water for a very long time will raise your body temperature. body temperature rise. Symptoms of this can include dizziness, nausea, fainting, lightheadedness and reduced receptivity.

Electricity

- Electrical installation is subject to local and state ordinances. The electrical circuit may only be installed by a qualified electrician. Earthing of the whirlpool tub is a prerequisite for safe use.
- Do not make any repairs or changes to the control system or other electronic parts.
- Never use the whirlpool tub during a thunderstorm.
- Never use the whirlpool tub with damaged electrical components or power supply.
- Do not connect any additional components (e.g. cables, additional speakers, headphones, etc.) to the pool.
- Place the whirlpool tub at least 3 metres away from any high-voltage lines.
- Always keep the flap to the control and electronics closed.
- It is not permitted to set up or operate lighting equipment, telephones, radios, televisions or other electrical devices within 1.5 m of the pool.

General

- Do not bring foreign objects into the pool that may damage the tub.
- Do not place any objects on the cover and do not sit/stand on it.
- Ensure that the cover is correctly placed and secured after each use.
- If you experience pain or dizziness while using the hot tub, discontinue use and consult a doctor.
- It is very important that persons with existing health restrictions such as heart conditions, high or low or high blood pressure, circulation problems, pregnancy, consult their doctor before using the whirlpool tub.
- Regular maintenance and care of the whirlpool tub will extend the service life of the individual components.
- Never allow the water in the whirlpool tub to freeze.
- Water temperatures above 38° C can be harmful to health.
- Only use the whirlpool tub if safety covers are fitted to all intake openings. This prevents body parts or hair from getting caught in the suction openings.

SAFETY TIPS

Safety and warning instructions are asserted in this section. Read the instructions thoroughly before use and inform third parties of potential risks. Failure to comply with these instructions may result in permanent physical injury and damage to property.

- Never use your whirlpool tub when the water temperature is above 40° C.
- Do not drink alcohol before or during the use of your whirlpool tub.
- If children use your whirlpool tub, we recommend lowering the water temperature to 30° C.
- Children should not use your whirlpool tub without adult supervision.
- In the event of pregnancy, high/low blood pressure and heart problems, please consult your doctor before using the whirlpool tub.
- Keep all POOLPFLEGE products in closed containers in their original packaging and out of the reach of children.
- Carefully read the dosing instructions for all POOLPFLEGE products before use.
- **NEVER** mix POOLPFLEGE products together.
- Always add POOLPFLEGE products to water, not vice versa.
- Use caution when dispensing POOLPFLEGE products and always wear eye and eye protection if indicated on the label.
- Prevent water from entering drains and public waters. Retain and dispose of contaminated wash water.
- Avoid release into the environment.
- Store all POOLPFLEGE products in a clean, dry and cool place. Rinse out the empty packaging and then dispose of in accordance with local regulations.

SAFETY INSTRUCTIONS

Do not fill the spa unless you have read and understood the Water Chemistry section. When filling the spa, it is important to perform a pH and alkaline test to ensure that the water is and remains clean.

Only use the whirlpool tub if safety covers are fitted to all suction openings. This prevents body parts or hair from getting caught in the suction openings.

- The wet surfaces are very slippery, so care should be taken when getting in and out.
- People with contagious diseases should not use the pool.
- Make sure that loose clothing or jewellery cannot get into the jets.
- The consumption of alcohol or drugs before or during the whirlpool bath should be avoided at all costs as there is a risk of losing consciousness and drowning. Alcohol and drug consumption can considerably increase the risk of fatal overheating of the body.
- Pregnant or possibly pregnant women
- should consult a doctor before using the whirlpool.
- consult a doctor before using the whirlpool.
- Never use the whirlpool immediately after a rigorous training session.
- Staying too long can be detrimental to health. The body can overheat.
- It is not recommended to use the whirlpool alone.
- Measure the water temperature with an accurate thermometer before using the pool.
- Water temperatures above 38° C can be harmful to health.
- Never leave children unsupervised when playing in the whirlpool.

- To avoid burns, especially for small children, always check the water temperature.
- When the whirlpool tub is not in use, make sure that the cover is properly fastened. Do not allow children to play on it as the cover could buckle.
- Always keep the flap to the control and electronics closed.
- This unit has an earth connection for connecting a solid copper earth wire to establish a ground connection between this unit and any metal earth electrode within a 1.5 m radius.
- Install the whirlpool tub at a distance of at least 1.5 m from all metallic surfaces.
- It is not permitted to set up or operate lighting equipment, telephones, radios, televisions or other electrical devices within a radius of 1.5 m of the pool unless these devices have been permanently installed by the manufacturer.
- The electrical connection for the whirlpool must include a suitable switch or circuit breaker with the appropriate rating.

LOCATION ANALYSIS

*Ensure that you position the whirlpool so that all equipment is accessible and the side fittings are not blocked.
Ensure that your installation follows all relevant local, state and national safety guidelines.*

If you have an idea of how you want to use your whirlpool, it will help you decide where to place it. For example, do you use it purely for relaxation or also for therapeutic purposes? If you want your whirlpool mainly for the relaxation of your family, make sure you leave enough space for other activities. If you use the whirlpool for relaxation and therapy, you may want to adapt the surroundings to this.

Think about the environment throughout the year so that you create the best conditions for you. Include the view of your neighbours in your selection.

To protect the hot tub from dirt and spills, place a foot mat in front of the entrance so that users can clean their feet before entering the pool. If possible, provide a water bowl for washing the feet.

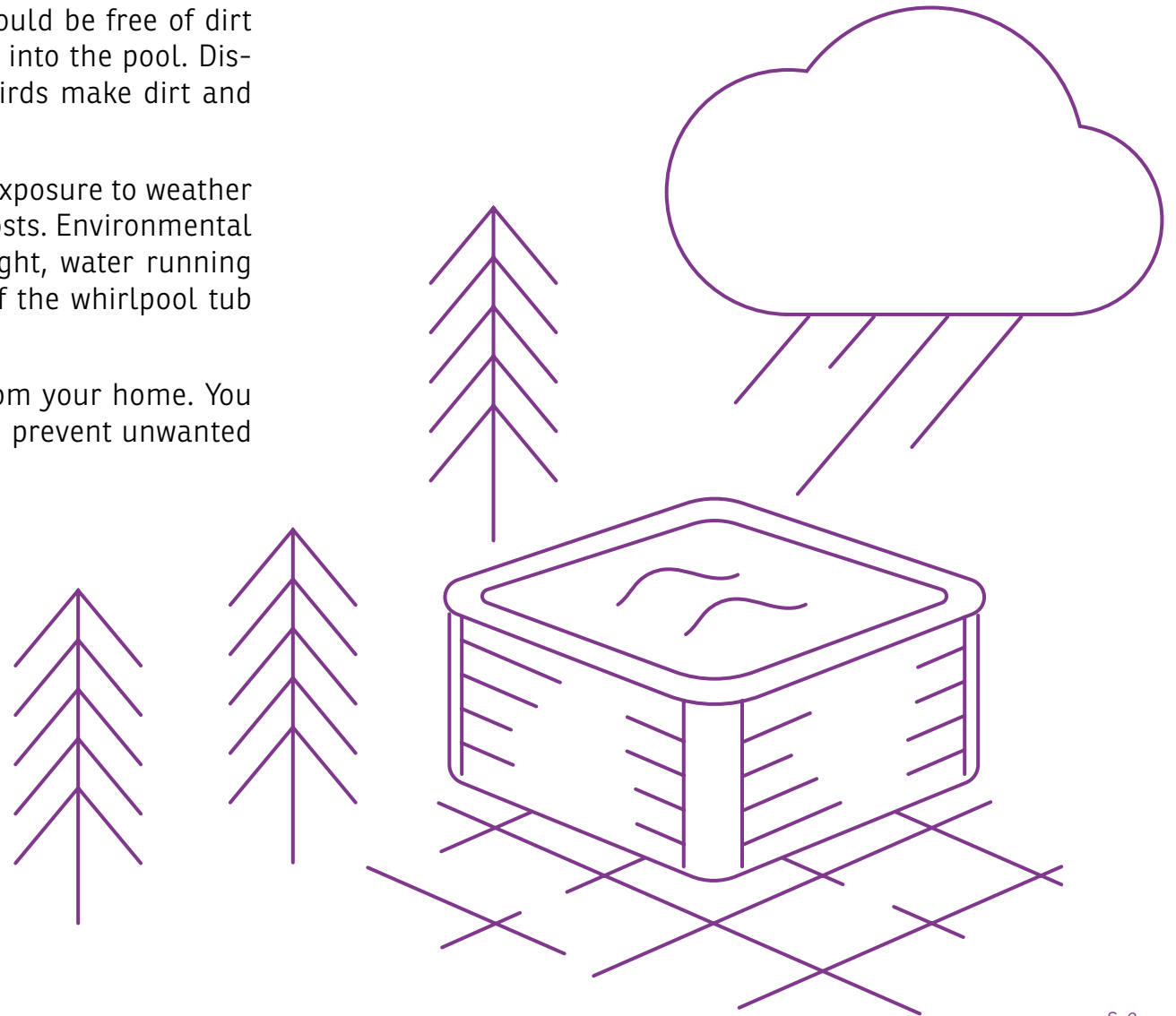
A distance of at least 1 metre is required around the whirlpool tub so that qualified personnel can maintain the device. Consult the responsible civil engineer to make sure that the foundation on which you want to place the whirlpool tub can also hold the weight of the pool all the time. Especially if the pool is to be placed on a garage, balcony, eaves or other platform.

If the whirlpool is used, the surrounding area may become wet. All objects, furniture and walls in the immediate vicinity should therefore be resistant to moisture or water.

The path to and from the whirlpool tub should be free of dirt and leaves so that they are not transported into the pool. Distance from trees and bushes (leaves and birds make dirt and work).

Sheltered environment: less wind and less exposure to weather will result in less repair and maintenance costs. Environmental factors such as rain, wind, snow and sunlight, water running down from roof curtains, shorten the life of the whirlpool tub cover.

You should be able to watch the hot tub from your home. You can also put up a fence. In this way you can prevent unwanted use by third parties.



PLACEMENT

Due to the combined weight of the whirlpool tub, water and users, it is very important that the foundation on which the whirlpool tub is placed is smooth, level and able to support this total weight evenly without fluctuations, slipping or subsidence for the entire installation period. If the whirlpool tub is set up on a surface that does not meet these requirements, damage to the panelling and/or the whirlpool tub shell may occur. Damage caused by this is not covered by the warranty. It is the responsibility of the whirlpool tub owner to ensure the proper condition of the foundation during the entire installation period.

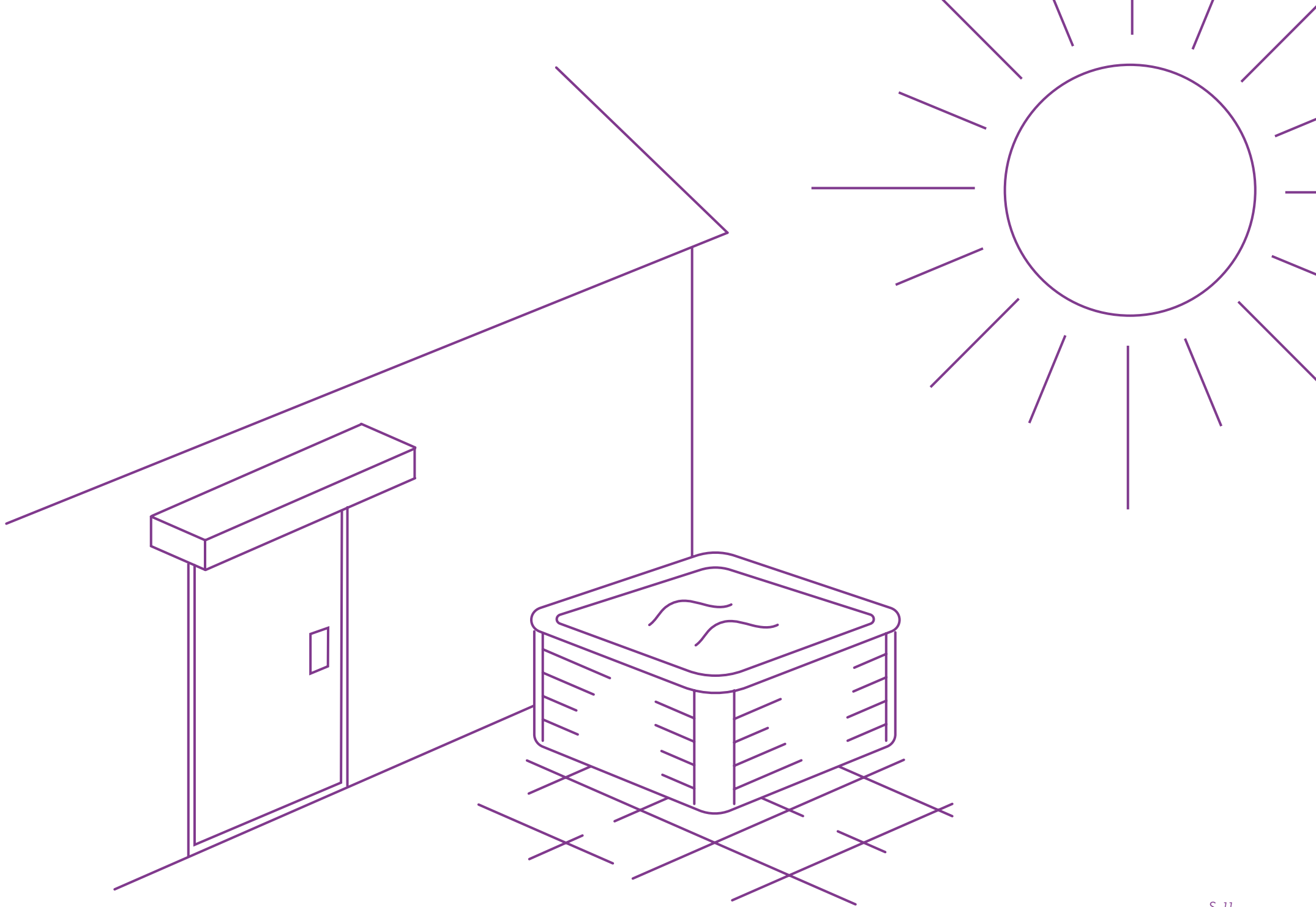
Outdoors

Observe the distance to the changing area. Also make sure that the path to the whirlpool is clean so that no dirt, grass or leaves can get into the whirlpool. Leaves and birds can increase the effort of keeping it clean considerably. Less wind and better protection from the elements can considerably reduce the operating and maintenance costs.

It is recommended not to place the whirlpool tub under a roof without rainwater drainage, as water run-off shortens the service life of the whirlpool tub cover.

In the house

Sufficient ventilation must be ensured for installations in the house. When the whirlpool tub is used, high humidity is created which can have a damaging effect on certain surfaces after some time. It is essential to ensure that the room has a floor and walls that are not sensitive to water. There should also be a floor drain in the room. No liability is accepted for any water damage.



ELECTRICAL CONNECTION

The electrical connection of the whirlpool tub must be carried out in accordance with the country-specific regulations, must be carried out by a qualified specialist company and must be approved by the responsible authorities.

The following must be observed

- No mains connections or connections with extension cables may be used to connect the whirlpool tub. Failure to comply with this requirement will invalidate the test mark and warranty.
- The mains connection **MUST** be made via a separate circuit that is not used to supply power to other electrical consumers.
- The cable cross-section must comply with the relevant VDE regulations.
- We recommend laying an underground cable.
- The power supply from the whirlpool tub **MUST** be connected via a separate residual current circuit breaker.
- Only copper cables may be used to ensure a proper connection. The electrical connection for the whirlpool tub must include a suitable switch or circuit breaker with the appropriate rating to enable all non-earthed live cables to be disconnected from the power supply.
- Although the circuit breaker must be easily accessible to the spa owner, it must be located at a minimum distance of 1.5 m from the spa.
- The electrical connection for the whirlpool tub must include a suitable residual current circuit breaker that complies with the SEV requirements.

Connection by the specialist staff

- Remove the centre cover plate from the front of the whirlpool tub.
- To access the power strip, remove the cover from the control box.
- Pull the cable of the main power supply through the cable guide into the control box. Secure the cable to the whirlpool tub panelling using the cable sleeve.
- Connect the lines to the terminal block. All lines must be securely connected and tightened.
- Replace the cover of the control box. The electrical connection is now complete.
- The green-coloured connection at the end of the control box, must be connected to earth. The connections must be made with a copper wire equivalent to the circuit conductors. This is to prevent electric shock.

FILL WHIRLPOOL

Do not fill the spa unless you have read and understood the Water Chemistry section. When filling the whirlpool tub, it is important that a pH and alkaline test is carried out to ensure that the water is and remains clean.

1. The whirlpool must not be switched on when you fill the whirlpool.
2. Never leave an unfilled whirlpool tub in direct sunlight without covering it. Resulting bubbles, nicks on the surface and discolouration on the jet covers are not covered by the manufacturer's warranty.
3. Never switch on the pumps in an unfilled whirlpool tub. This can lead to considerable damage.
4. Push the garden hose or another clean water source directly into the filter unit. Push it in as far as possible.
5. Secure the hose and turn on the water. You can fill in warm water or cold water. Warm water will shorten the warm-up time.
6. Although the pool was checked before delivery, a leak test should still be carried out.
7. If the whirlpool tub is filled to approx. 15 cm below the rim, turn off the water and remove the hose.
8. Now switch on the whirlpool tub and add the chemicals as explained in the instructions.
9. Do not fill the whirlpool tub with too much water pressure, as air can get into the pipes.

Never fill the pool with hot water!

Whirlpool cover

The whirlpool tub cover is an important factor in maintaining the water temperature. It also serves to ensure safety so that no unauthorised persons can use the whirlpool.

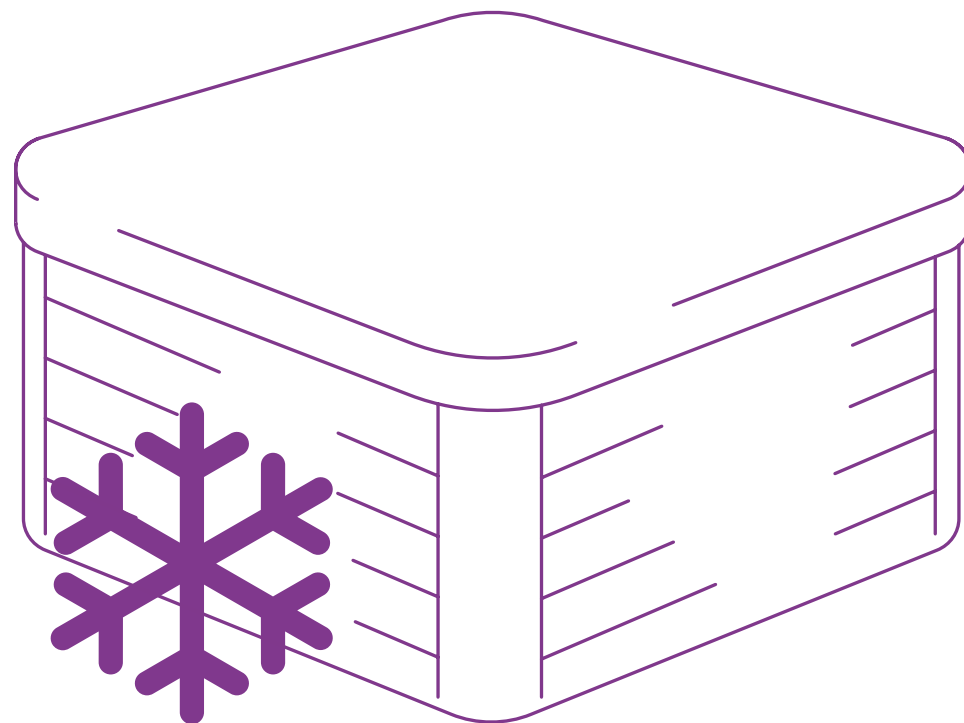
- Close the whirlpool when you are not using it.
- Remove snow and ice, as the additional weight can weight can cause the cover to break through.
- Do not place or lay the cover on rough surfaces so that the protective surfaces so that the protective layer is not damaged.
- If you empty the whirlpool tub, mount the cover to prevent damage from sunlight.

Wintering

If the thermostat measures a water temperature of 5° C or less, the pool automatically activates frost protection and „ICE“ appears on the display.

The frost protection switches on all pumps, fans and heating elements and circulates the water until the temperature rises above 7° C again.

IMPORTANT: If you allow the water to freeze, this can cause significant damage to the walls, pumps, electrical units and the entire installation.



Ozone generator

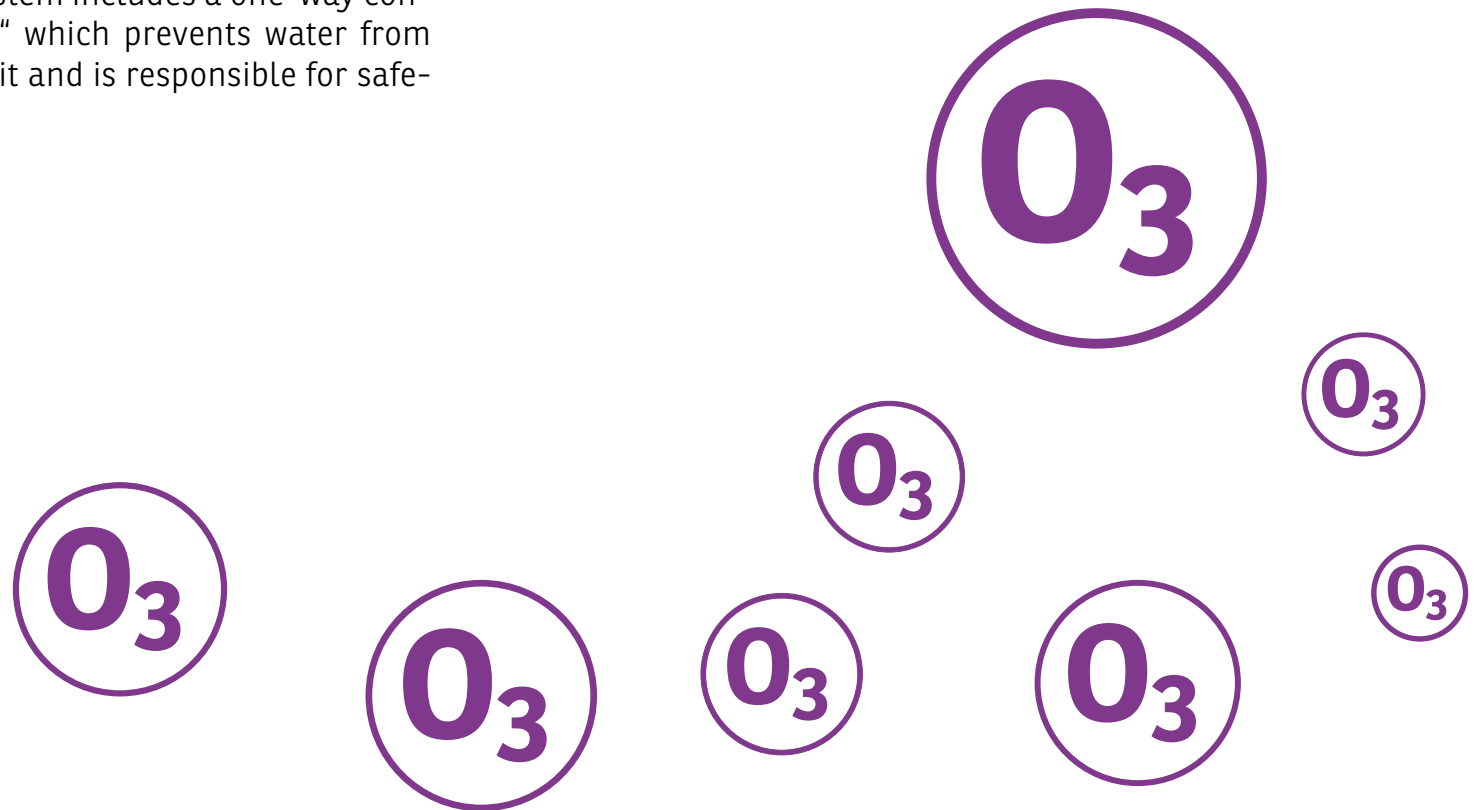
Ozone generators help keep your water clean by forcing air through a discharge chip or UV-A lamp and then continuously adding it to the water.

Ozone (O₃) is a fast-reacting chemical bond that removes bacteria in the air and water. Ozone reacts only very briefly and oxidises after a few minutes.

The ozone injection system is a hose assembly with a nozzle that cannot be turned off. The system includes a one-way control valve and a „Hartford Loop“ which prevents water from reaching the ozone generator unit and is responsible for safety.

The ozone generator does not eliminate the need for chemicals and disinfectants. It simply purifies as much as it needs to maintain the water balance. The ozone generator only works within the filtration circuit.

The ozone injection system is already installed during production.



Shock water

Water shocking is the process of removing from water organic material such as body oils, cosmetics and lotions that can cause foul odours, eye and/or skin irritation and cloudy water. During shock, these materials oxidise.

IMPORTANT: Always remove the cushions when you shock the water. Add them back as soon as you have cleaned the water. Only use chemicals to shock the water that are recommended by your dealer. Incorrect chemicals can damage the equipment.



Water disinfection

Algae, fungi and bacteria can spread optimally in higher temperatures. Impurities can have a negative effect on the body or components of the whirlpool. The disinfectant is used against bacteria or algae growth. It helps to keep the water hygienic and clean.

Never mix different disinfectants together. Change all the water and fill it with new, clean water again if you want to change the disinfectant.

UV disinfection

UV light is used in many situations to keep large amounts of water clean. In a whirlpool with built-in UV disinfection, the water circulates through a shielded chamber which irradiates the water with UV light to deactivate bacteria and fungi.

UV rays are harmful to the skin and eyes when directly exposed, but shielded and only passively applied, it is harmless and adds tremendous value to overall water maintenance.

COMMISSIONING

Never fill the whirlpool tub with hot water. Do not connect electricity to an empty whirlpool tub, otherwise the control, the heating, the pump or other systems could be damaged.

Function test

- Check that the filter insert, foam basket and strainers are in place in the foot area.
- Check all electrical connections and fixings.
- Make sure that the drain is properly closed.
- Check that the main fuse is working and switch on the power. As soon as the pump is running, the water flows.

Filling the whirlpool tub

- Fill the whirlpool tub with cold water using a garden hose via the filter cartridge (so that no air remains in the pipes) to approx. 15 cm below the edge of the whirlpool tub.

Electrical test

- Check that the main fuse is working properly.
- Switch on the power.
- As soon as the pump is running, the water flows into the whirlpool.

Operational test

- The control unit is equipped with a massage programme ex works. Press the Jet 1, Jet 2, and Jet 3 buttons to perform a short function test. Check that all jets are working properly.
- Weak or varying massage jets are signs of low water level or clogged filters.
- If certain jets do not work at all, it is possible that air has remained in the respective pipes because they were filled too quickly.
- Open the casing to the pump. Loosen the quick coupling in front of the pump a little.
- Let some air escape, this will release the air from the pipes.
- Screw the casing back on and set the pumps again.
- It takes a few seconds for the water to be sucked in again, after which the nozzles should run properly.

Water temperature

- Set the desired water temperature on the control panel (for the first filling, we recommend setting the heating to 36° C). Now cover the whirlpool tub with the protective cover.
- Wait approx. 8 hours until the water temperature has been reached. Check the temperature development in the pool in the meantime.

CONTROL AND OPERATING PANEL



BALBOA TOUCH CONTROL

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BALBOA CONTROL

Page 37



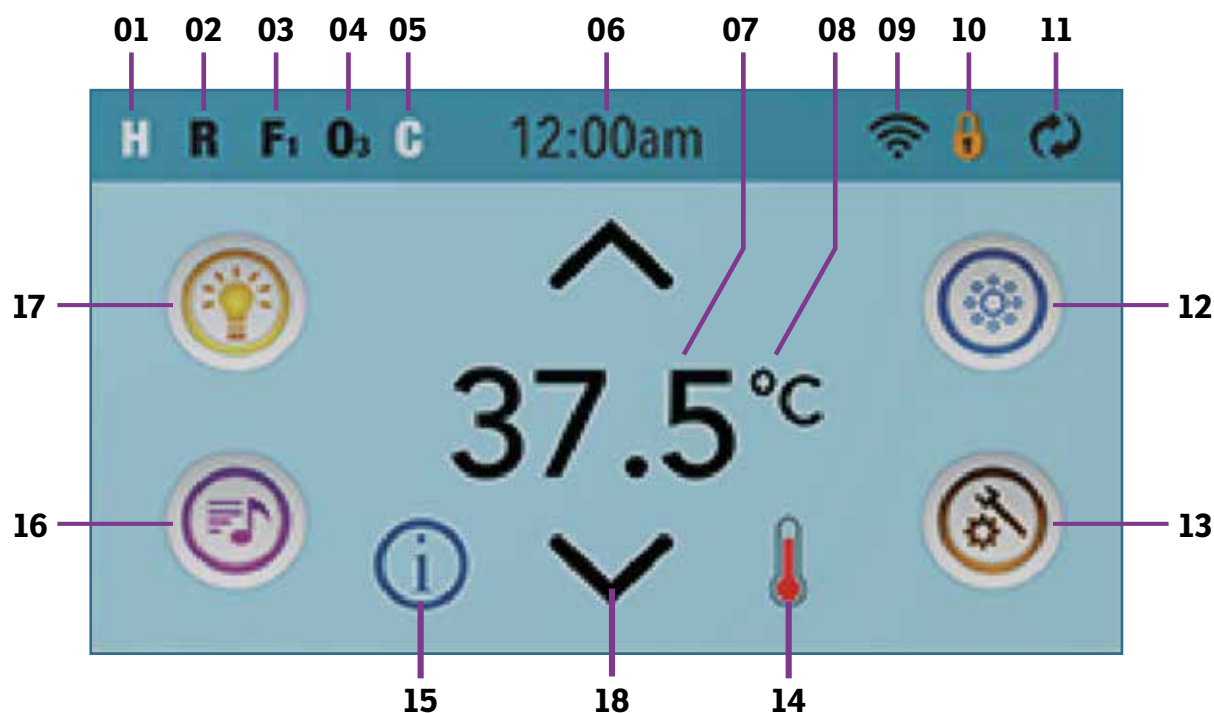
STANDARD CONTROL

Page 48

Art-Nr.	Name	Color	Typ	Cotnrol	Persons	Dimension
50205008	NASSAU	white	Whirlpool	BALBOA	5	195 x 82 x 195 cm
50300208	ATLANTIK	white	Swimspa	BALBOA TOUCH	7	580 x 147 x 220 cm
50300408	INDIK	white	Swimspa	BALBOA TOUCH	6	430 x 147 x 225 cm
50200618 / 50200708	LANAI	white / black	Whirlpool	BALBOA TOUCH	3	200 x 92 x 160 cm
50202608 / 50202518	ARUBA	white / black	Whirlpool	BALBOA TOUCH	5	230 x 97 x 230 cm
50203808 / 50204218	SARIA	white / black	Whirlpool	BALBOA TOUCH	6	220 x 95 x 220 cm
50203908 / 50204118	AIRE	white / black	Whirlpool	BALBOA TOUCH	5	220 x 95 x 220 cm
50204308 / 50204418	PALAU	white / black	Whirlpool	BALBOA TOUCH	3	210 x 93 x 160 cm
50204508 / 50204618	SANSIBAR	white / black	Whirlpool	BALBOA TOUCH	6	200 x 89 x 200 cm
50202778	GLYMUR	brown	Whirlpool	BALBOA	6	230 x 115 x 215 cm
50203308 / 50203318	FLORES	white / black	Whirlpool	STANDARD	7	180 x 160 x 82 cm
50203408 / 50204018	KRETA	white / black	Whirlpool	STANDARD	2	205 x 70 x 130 cm
50204608 / 50203618	BASILAN	white / black	Whirlpool	STANDARD	3	195 x 75 x 127 cm
50205108 / 50205118	BORNEO	white / black	Whirlpool	BALBOA	5	200 x 90 x 200 cm

BALBOA TOUCH CONTROL

Important information about the operation of the whirlpool tub can be seen on the main screen. Most functions, including setting the target temperature, can be accessed from this screen. Time of day, ozone and filter status as well as other messages and warnings are available.

















- 01. temperature range
- 02. operating status
- 03. filter cycle
- 04. ozone active
- 05. cleaning cycle
- 06. current time
- 07. water temperature
- 08. temperature unit
- 09. WiFi signal display
- 10. lock symbol
- 11. rotate screen
- 12. nozzle symbol
- 13. settings
- 14. heating display
- 15. maintenance symbol
- 16. light symbol
- 17. music symbol
- 18. decrease/increase temperature

Status message

After 30 minutes*, the display automatically goes into sleep mode, causing the unit to switch off. This is normal operation. Touch anywhere on the screen to wake up the panel.

*This time can be adjusted in the settings. (page 32)

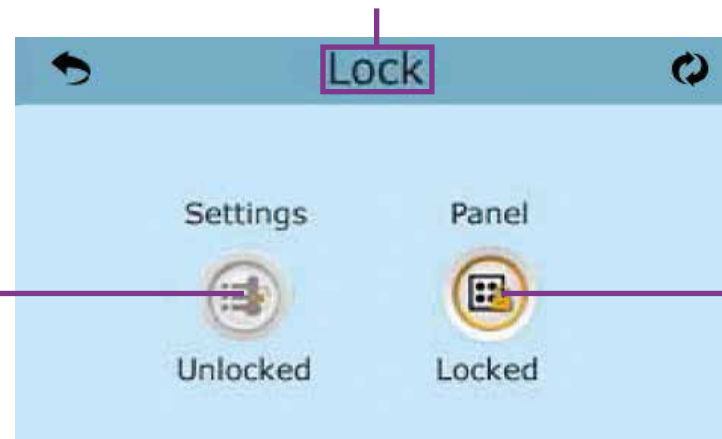
<div>H</div> <div>L</div>	<div>High temperature range</div> <div>Low temperature range</div>	<div></div> <div>WIFI connection active</div>	<div></div> <div>Fatal mistake</div>
<div>R</div> <div>RR</div> <div>R</div>	<div>Standby mode</div> <div>Standby and sleep mode</div> <div>Sleep mode</div> <div>(Page 29)</div>	<div></div> <div>Lock Screen Active (page 24)</div>	<div></div> <div>Normal error</div>
<div>F₁</div> <div>F₂</div> <div>F+</div>	<div>Filter cycle 1 running</div> <div>Filter cycle 2 running</div> <div>Filter cycle 1 & 2 both running</div>	<div></div> <div>Screen rotation</div> <div>You can rotate the screen to make it easier for you to operate.</div>	<div></div> <div>Reminder message</div>
<div>O₃</div>	<div>Ozone generator running</div>	<div></div> <div>Heater running (page 26)</div>	<div></div> <div>Information message</div> <div>Press the corresponding icon to get more information about the status message.</div>
<div>C</div>	<div>Purge cycle running</div> <div>Not all systems with a purge cycle show this symbol.</div>	<div></div> <div>Go to previous screen</div> <div>(Unsaved settings are deleted)</div>	<div></div> <div>Increase and decrease the temp.</div>
		<div></div> <div>Save setting</div>	<div></div> <div>Nozzles, blower control (page 27)</div>
			<div><div>°F</div><div>°C</div></div> <div>Temperature display in Fahrenheit or Celsius</div> <div>Set temperature, when °F or °C flashes.</div>
			<div></div> <div>Settings are active</div>
			<div></div> <div>Settings not active</div>

SCREEN LOCK



Use the screen lock function to prevent unwanted access to the control.

Press for 5 sec.



Lock settings

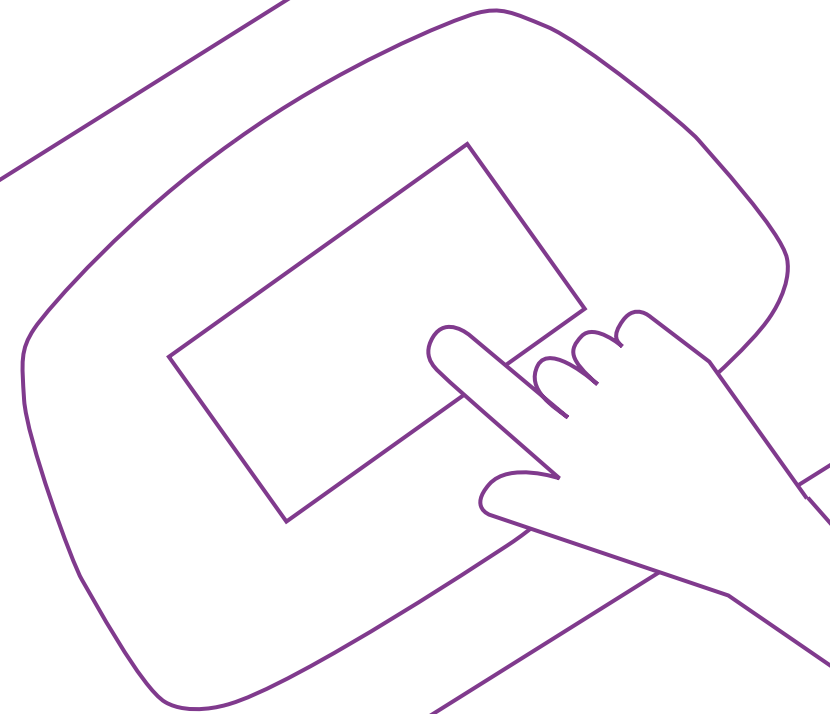
With this function, settings can be displayed but no longer changed.

Lock screen

This function completely blocks access to the control element.

Tap the display to go to the „Messages“ screen, which displays the message. Some messages are „Call service company“ as only a service technician should fix the problem. If the control is locked and a warning message appears, you will be taken to the lock screen (where you must unlock the control) before you can delete the message.

Touching the Error / Warning / Reminder / Info icon on the Messages screen, will take you to the System Information screen, the information from which will be helpful when troubleshooting on the phone or for the service technician on site.



MAIN SCREEN

SET TEMPERATURE

Press up or down once to display the set temperature (indicated by a flashing °F or °C and a change in colour of the temperature). Press up or down again to change the set temperature. The set temperature changes immediately. If you want to change between the high temperature range and the low temperature range, you must go to the Settings screen.

PRESS & HOLD

If you press and hold Up or Down, the temperature changes until you stop pressing or until the temperature range limits are reached.



Temperature range

This system has two temperature range settings with independent set temperatures. The specific range can be selected on the „Settings“ screen and is visible on the main screen in the upper left corner of the display. These ranges can be used for a variety of reasons, with a common use being a ‚ready‘ setting versus a ‚holiday‘ setting. Each range maintains its own user-programmed setpoint temperature. When a range is selected, the spa

will heat to the set temperature assigned to that range.

The winter safety system is active in both areas.

High range

26-40°C
(80-104°F)

Low range

10-37°C
(50-99°F)

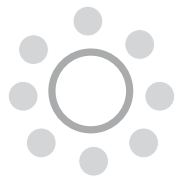


WHIRLPOOL FUNCTIONS

The spa screen displays all available devices* for control. The display shows icons that relate to the equipment installed in a particular spa model, so this screen may change depending on the installation. The icon buttons are used to select and control individual devices.

Some devices, such as pumps, can have more than one ON state, so the icon changes to reflect the state of the device. Below are some examples of 2-speed pump displays.

If the spa has a circulation pump, a circulation pump icon will appear to indicate its activity, but outside of suction mode, the circulation pump cannot be controlled directly.



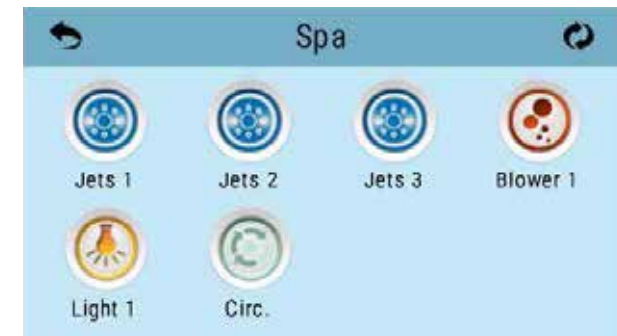
**NOZZLES
OFF**



**NOZZLES
LOW**



**NOZZLES
STRONG**



*Exception: The spa main light is not displayed on the spa screen; it is only displayed (and controlled) on the main screen.

SET TIME



Setting the time of day is important for setting filtration times and other background functions.

Press the Settings icon on the main screen and the Time icon on the next screen.
Set the time with the up and down buttons and confirm the setting with the save button.

NOTE: If the power supply to the system is interrupted, the time is time is maintained for several days (this only applies to some systems).



If no time is set, an information message is displayed on the main screen.

HEATING MODE

In order for the whirlpool to heat, a pump must circulate the water through the heater. The pump that performs this function is called a „heating pump“. The heating pump can either be a 2-speed pump or a circulation pump.



READY MODE

The heating pump runs every 30 minutes in this mode to maintain the water temperature and update the temperature display. This is known as „polling“.



READY AND SLEEP MODE

If the user activates the heating pump during the sleep mode, the whirlpool starts the ready sleep mode. After 60 minutes, the pool returns to standby mode.



SLEEP MODE

In sleep mode, heating only takes place during the filter cycles. Since there is no polling, the temperature display does not show the current temperature until the heating pump has run for 1-2 min.

CIRCULATION MODE (24 H)

If the spa is configured for 24-hour circulation, the heating pump runs continuously. Since the heating pump is always running, the spa will maintain the set temperature in standby mode and heat as needed. In standby mode, the

whirlpool tub only heats to the set temperature during the programmed filter times, although the water is constantly filtered.

SUCTION MODE

After the first start-up sequence, the spa goes into priming mode and the screen is displayed.

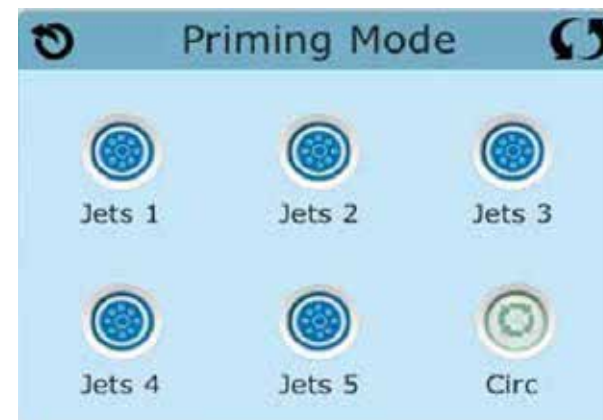
Only pumps can be operated on this screen. During priming mode, the heater is switched off as it is supplied with little or no water.

Once the Priming Mode screen is displayed on the control panel, press the „Jet 1“ button once to start pump 1 at low speed, press the button again to activate a higher speed. Also select the other pumps to switch them on. The pumps will now run in „high speed“ mode to facilitate self-priming. If after 2 minutes the pumps have still not started priming

and no water is coming out of the jets, switch the pumps off and repeat the process. Note: Switching the pumps off and on will initiate a new priming process of the pumps. Sometimes it helps with self-priming to switch the pumps off and on again for a short time.

Do not repeat this procedure more than 5 times!

If the pumps still do not prime successfully, switch off the pumps and call a technician.



NOTE: A pump should not run for more than 2 minutes without sucking in water and under no circumstances until the end of the suction mode (4-5 minutes). Otherwise, this may cause damage or overheating of the pump.

FILTRATION



Main filtration

Using the same navigation as for setting the time, the start time and duration of the filter cycles can be set. Each setting can be made in 15-minute increments. The control unit calculates the end time and displays it automatically.

Optional filtration

Press „1“ or „2“ to view or change the corresponding filter time. Press the same key again to deactivate the filter time. Filter time „1“ and „2“ can overlap, which shortens the total filter time by the overlapping time.



MEANING OF THE FILTER CYCLES

To maintain hygienic conditions and also protect against frost, additional units are cleaned by running briefly at the beginning of each filter cycle. (Some systems have a certain number of cleaning cycles per day, regardless of the number of filter cycles per day. In this case, the cleaning cycles will not coincide with the start of the filter cycle). If filter cycle 1 is set for 24 hours, filter cycle 2 will start a purge if it is so programmed.

LIGHT CYCLE



If Light Cycle does not appear in the Settings, the Light Timer function is not enabled by the manufacturer.

The Light Cycle icon in the Settings, takes you to the screen where you can control the Light Cycle. When enabled, the Light Timer is disabled by default. Press Disabled to enable it (ON). The settings can be edited in the same way as the filter cycles.

AID



Panel Standby

Select how long the display should remain active after the last input before it goes into sleep mode. The default setting is 30 minutes.

Demo Modus

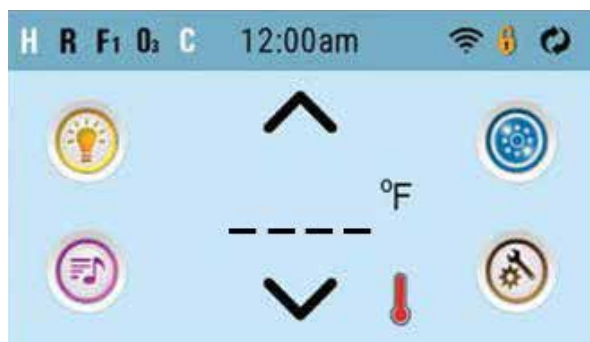
Demo mode is not always activated, so it may not be displayed. This is used to operate several units in a sequence to demonstrate the various functions of a particular spa.

Faults

The error log is a record of the last 24 errors that can be reviewed by the service technician. Use the up and down buttons to see each error.

GENERAL NEWS

Most messages and alarms appear on the screen below. Some alarms and messages can be displayed in a sequence.



Water temperature unknown

It may happen that no temperature is displayed on the screen.

Wait until the water pump has circulated for at least one minute.



Frost warning

A potential frost hazard has been detected or the aux frost switch is closed. All appliances are running.

In some cases, the pumps can be switched on and off and the heating can run during frost protection. This is an operational message and not an error message.

WATER LEVEL TOO LOW



This message can only appear on a system that uses a water level sensor. It appears when the water level is too low or the water level sensor is not connected and disappears automatically when the water level is sufficient again.

Pumps and the heating are switched off when this message appears.

ERROR CODES – HEATING

*For Balboa
& Balboa touch

M029 - WATER TOO HOT

The system has measured a SPA water temperature of 110° F (43.3° C) or more and has deactivated the SPA function. The system will automatically reset if the SPA has a water temperature below 108° F (42.2° C). Check if the pump has been running for a long time or if the ambient temperature is high.

M016 - WATER FLOW LOW

It may be that the water flow through the heater is too low to transport the heat out of the heating element. The heater will restart after approx. 1 minute. See „Checking the flow rate“ below.

M017 - WATER FLOW INSUFFICIENT

The water flow through the heater is too low to transport the heat out of the heating element and the heater has been deactivated. See „Flow controls“ below. After the problem has been solved, you must press any button to reset it and start the heater. After the problem has been solved, please reload the message.

M028 - HEATING POSSIBLY DRY

Possibly dry heater, or not enough water in the heater to start it. The SPA is for 15 minutes switch off. Press any button to reset it and start the heater. See „Flow controls“ below. Flow controls“ below.

M027 - HEATING IS DRY

There is not enough water in the heater to start it. The SPA shuts down. After the problem is solved, the message must be cleared to start the heater. See „Flow controls“ below.

M030 - HEATING TOO HOT

One of the temperature sensors has detected the water temperature of 118° F (47.8° C) in the heater and the SPA has shut down. If the water temperature is below 108° F (42.2° C), the message must be cleared. See „Flow Controls“ below.

ERROR CODES – SENSOR & SYSTEM

*For Balboa
& Balboa touch

M015 - SENSORS NOT SYNCHRONISED

The temperature sensors can deviate by 3°. Call customer service.

M026 - SENSOR SYNCHRONISATION FAILED

The temperature sensors are not synchronous and the fault has been present for at least 1 hour. Call customer service.
(M031: Sensor A failed, M032: Sensor B failed)

M022 - PROGRAM MEMORY ERROR

At start-up, the system did not pass the checksum programme test. There is a problem with the firmware (operating programme) and requires a call to Customer Service.

M021 - SETTINGS RESET

Contact Customer Service if this message appears several times after heating up.

M020 - ERROR OF THE CLOCK

Contact your dealer or service company.

M036 - FAULT OF THE RCD

May indicate an unsecured installation. Contact your dealer or service company.

M034 - PUMP BLOCKED

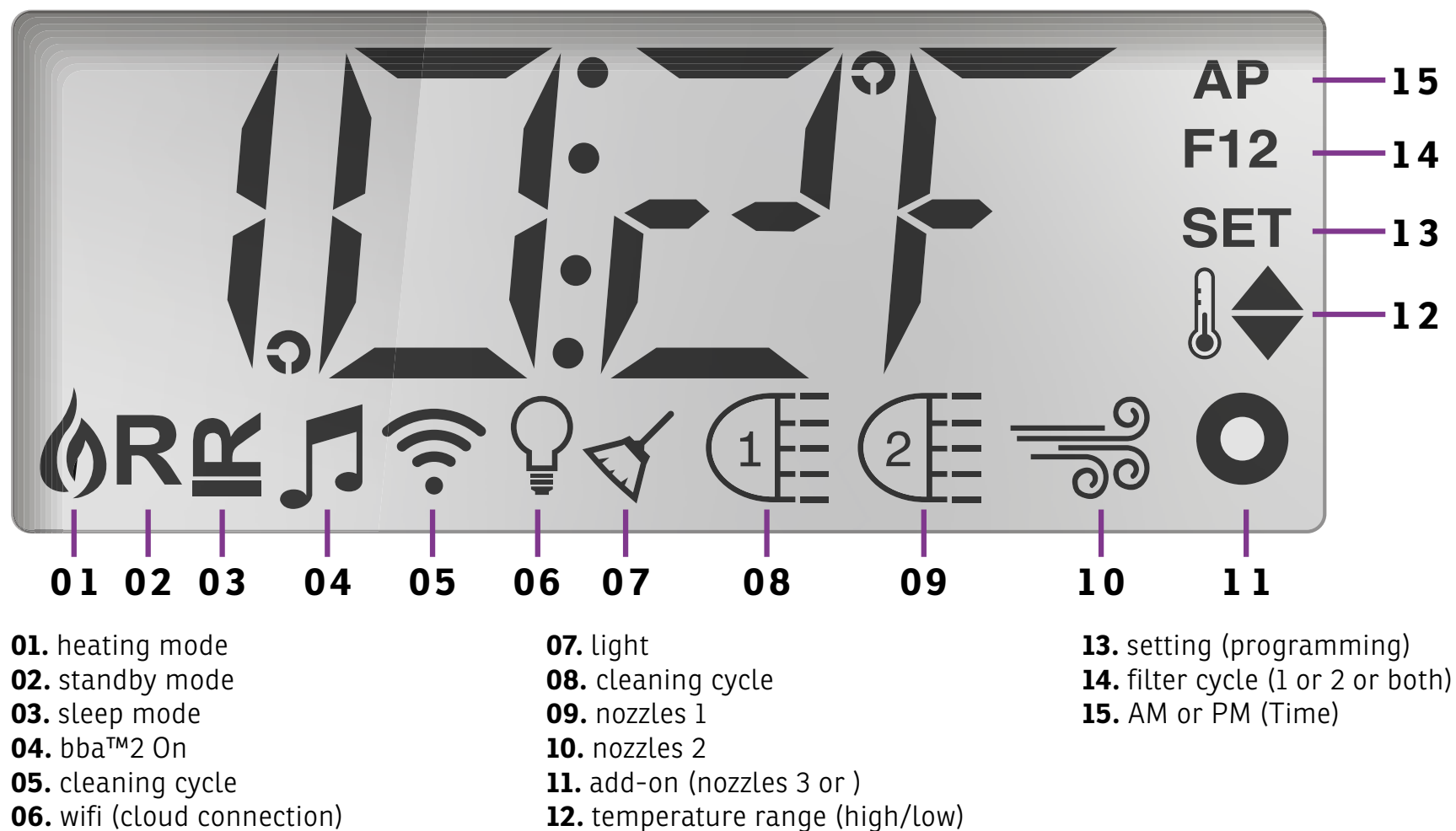
Water can become overheated. Switch off the whirlpool tub and do not enter the water.
Contact your dealer or service company.

M035 - OVERHEATING ERROR

A pump seems to have been blocked during the last operation of the SPA. Switch off the spa and do not enter the water.
Contact your dealer or service company.



BALBOA CONTROL





- 01.** up
- 02.** down
- 03.** light / menu
- 04.** aux

Some have separate WARM (up) and COOL (down) buttons, others have a single temperature button. In the navigation diagrams, temperature buttons are indicated as a single button symbol. On controls with two temperature buttons (Warm and Cool), both can be used for easy navigation and programming if only one temperature icon is shown.



The MENU/LIGHT key is used to select the different menus and to navigate in the respective sections.

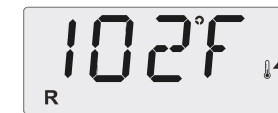
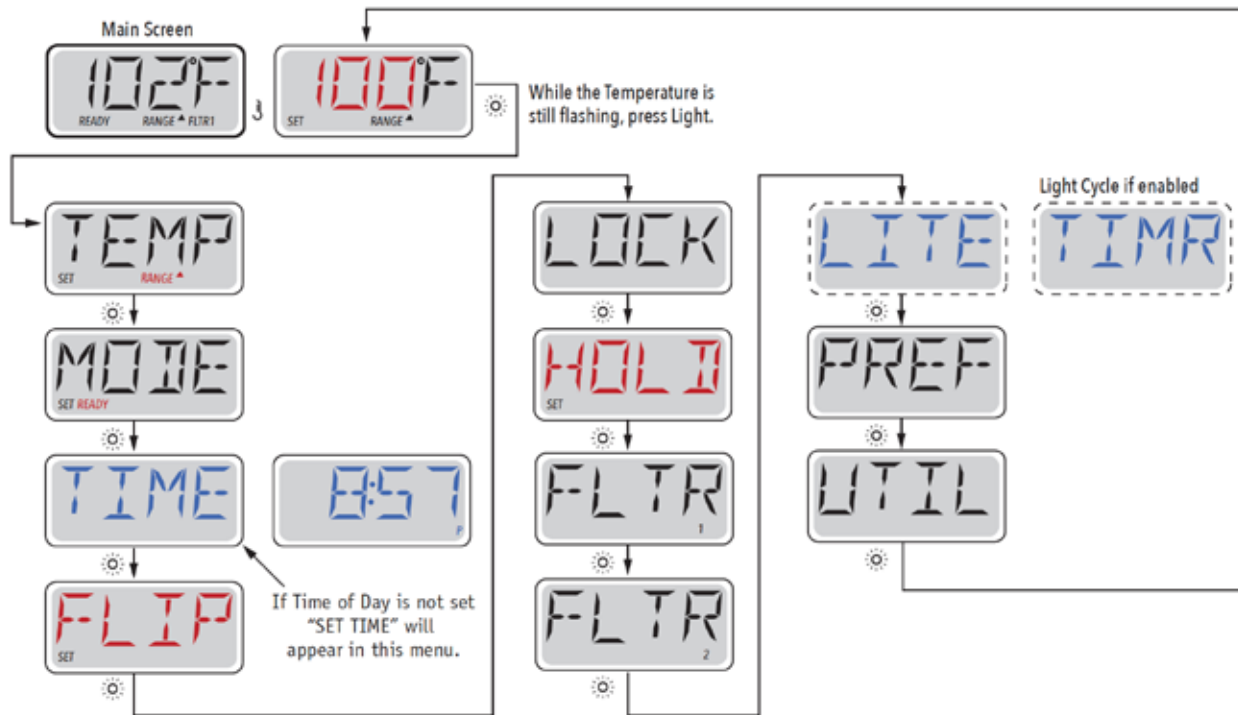
Typical use of the temperature button(s) allows the set temp. to be changed while the numbers in the display are flashing. The menus can be exited by pressing certain buttons. The menus can be exited by pressing certain keys. After a few seconds, the control returns to normal operation.

Navigating through the entire menu structure is done with 2 or 3 buttons on the control element.

POWER-UP SCREENS

Each time the system is switched on, a sequence of numbers is displayed.
After the start sequence of numbers, the system switches to priming mode.

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
-  A temperature button, used for "Action"
-  Light or dedicated "Choose" button, depending on control panel configuration
- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



If you wait a few seconds in the main menu, the display returns to the main screen. Most changes are not saved until Menu/Select is pressed.

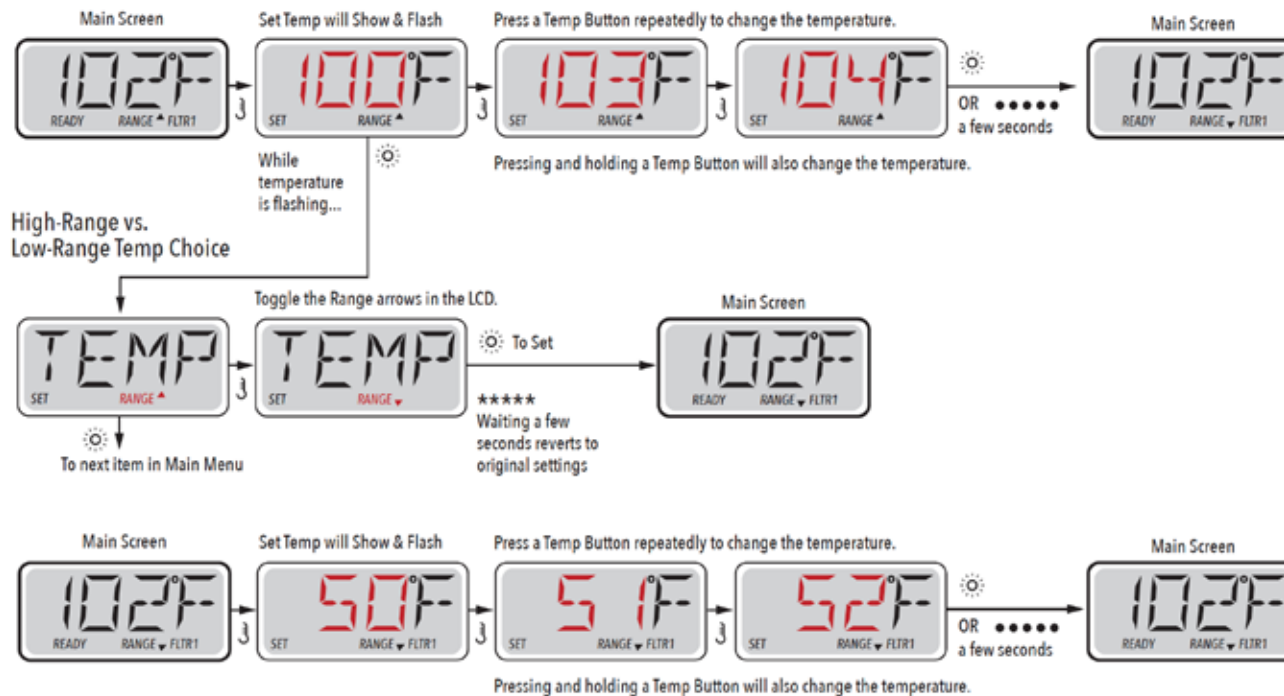


Indicates a Menu Item that Depends on a Manufacturer Configuration and may or may not appear.

DUAL TEMPERATURE RANGES

This system has two temperature ranges with independent set temperatures. The upper range is indicated on the display by a thermometer and an „up” arrow, and the lower range is indicated on the display by a thermometer and a „down” arrow.

These ranges can be used for different purposes, the most common being the „ready to use“ setting and the „vacation“ setting. The ranges are selected using the menu structures below. Each range has its own set temperature, programmed by the user. Once an area is selected, the spa will heat to the set temperature.



For example:

The Upper Range can be set between 26 °C and 40 °C.

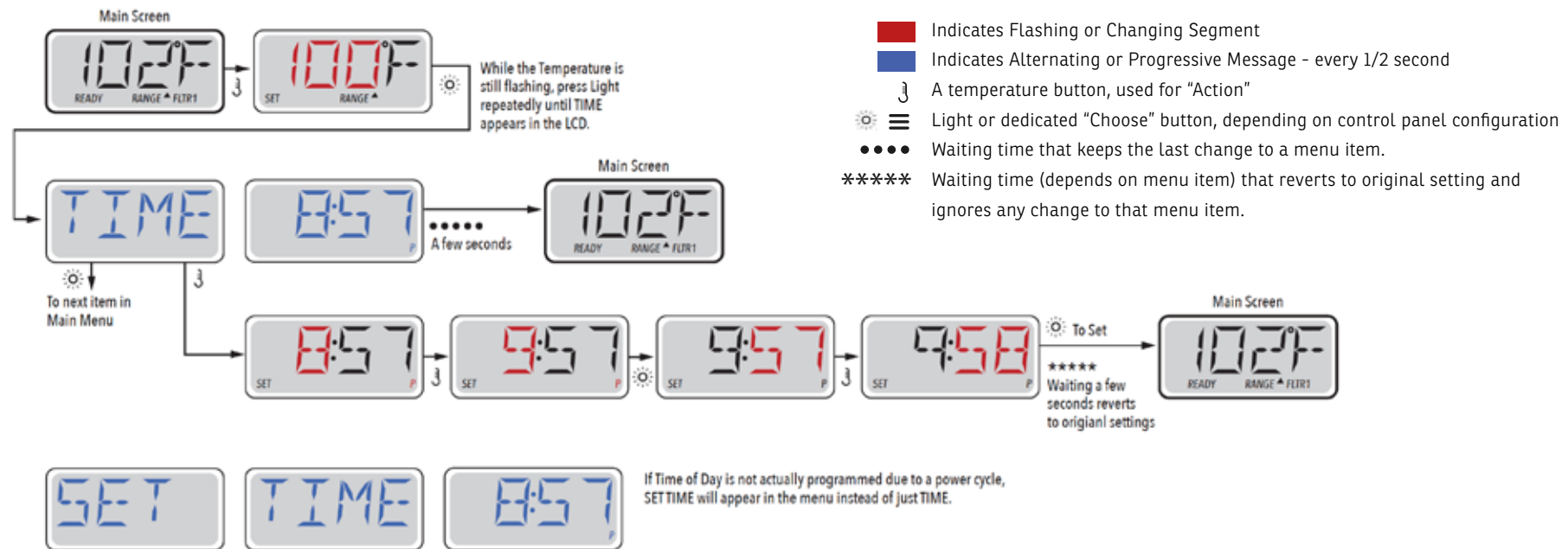
The Lower Range can be set between 10 °C and 37 °C.

Ranges can be determined by the manufacturer.

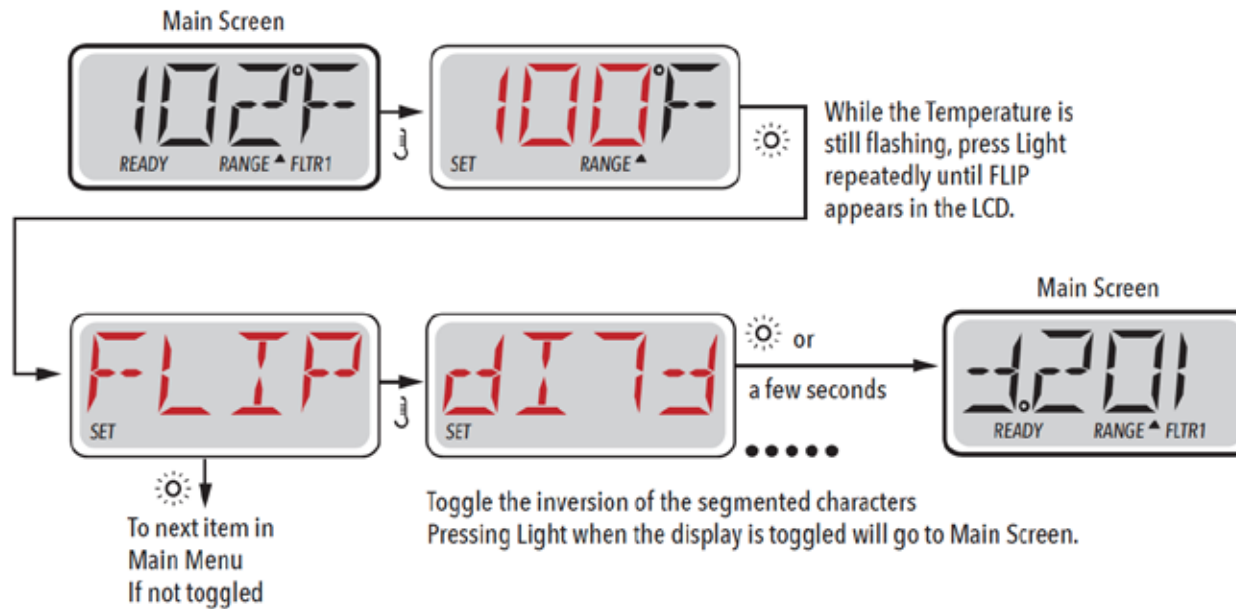
Frost protection is active in each range.

SHOW AND SET TIME-OF-DAY

Setting the time-of-day can be important for determining filtration times and other background features. When in the TIME menu, SET TIME will flash on the display if no time-of-day is set in the memory. 24-hour time display can be set under the PREF menu.



ROTATE DISPLAY



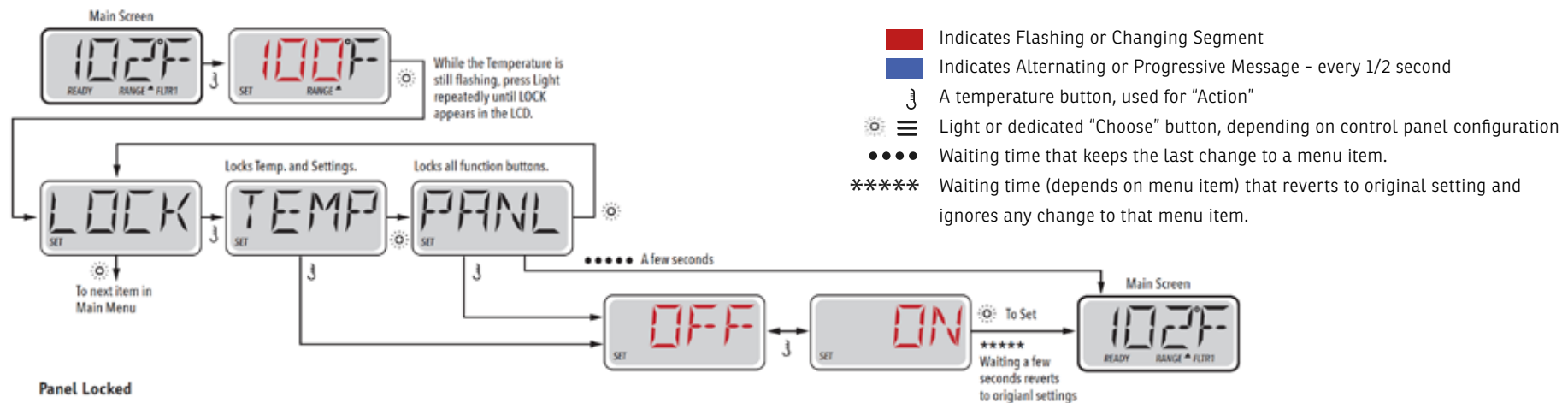
Note:

Some panels may have a dedicated FLIP button, which allows the user to flip the display with a single button-press.

LOCK DISPLAY

The control can be locked to prevent unwanted use or temperature setting.

Locking the control panel prevents the control from being used, but all automatic functions are still active. When the temperature is locked, the nozzles and other functions can still be used, only the set temperature and other programmed settings can no longer be changed.

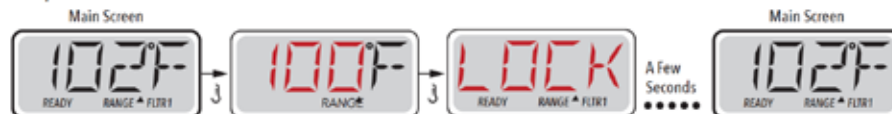


Panel Locked



LOCK will remain on the display for 3 seconds and then revert to the normal display.

Temperature Locked



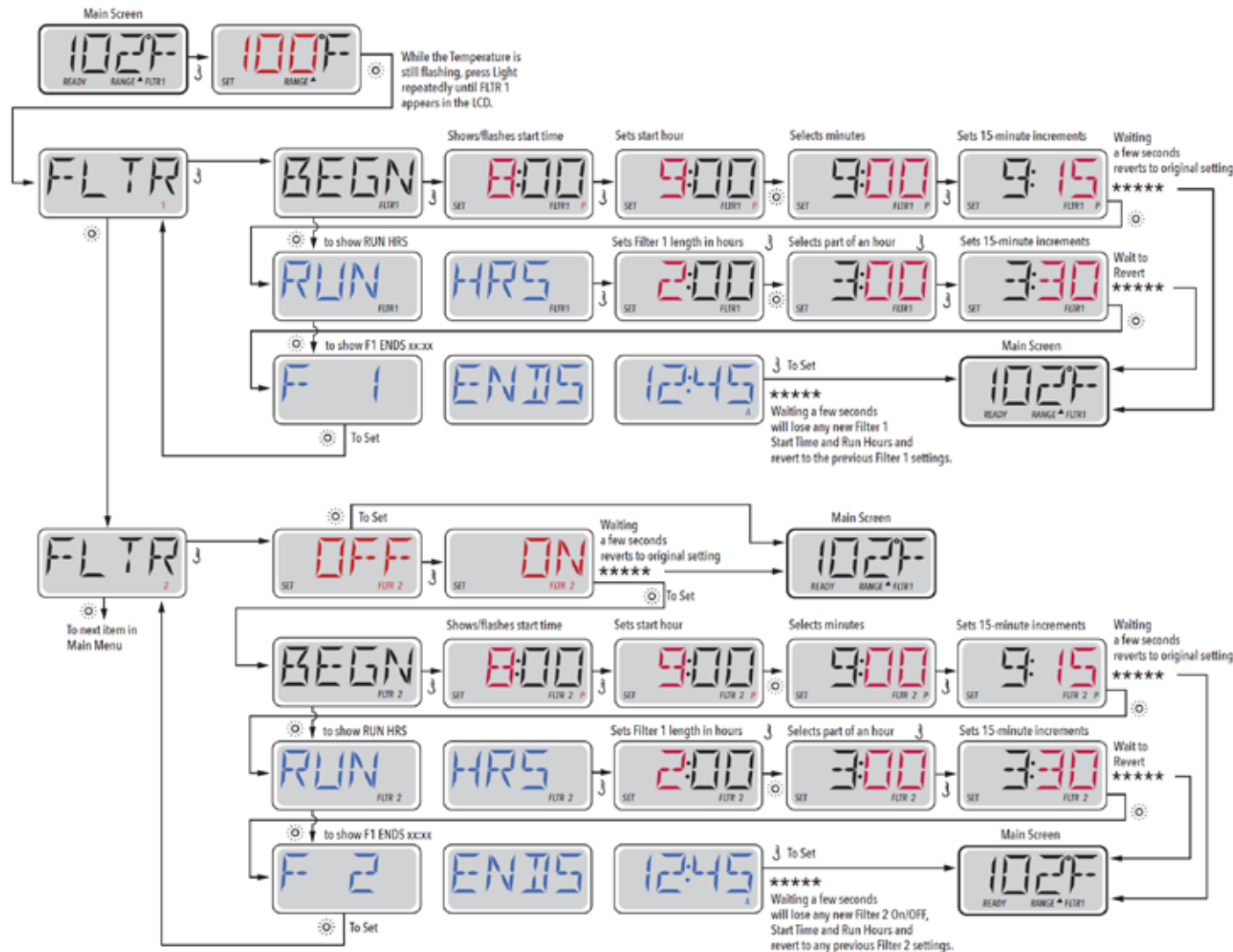
When the Temperature is locked, the panel will display the Set Temperature by pressing a Temperature Button, as usual. LOCK will appear if an attempt to reset the temperature is made with a subsequent button press. Adjustable settings in the menus are also locked. Other function buttons will operate normally.

UNLOCK



By pressing and holding the Temperature button (or Up button, if available), Slowly press and release the Light Button two times.

ADJUSTING FILTRATION



A start time and a duration are set for the filter cycles. The start time is represented by an „A“ or „P“ in the lower right corner of the display. The duration has no „A“ or „P“ indication. Each setting can be adjusted in 15 minute increments. The control calculates the end time and displays it automatically.

Filter cycle 2 - Optional filtering

Filter cycle 2 is deactivated by default. It is possible to overlap filter cycle 1 and filter cycle 2, which shortens the total filtering by the overlap time.

Flushing cycles

To maintain hygienic conditions, additional pumps and/or blowers flush water from their respective pipelines by briefly switching on at the beginning of each filter cycle.



When filter cycle 1 is set to 24 hours, the flushing of filter cycle 2 starts at the programmed time of filter cycle 2.

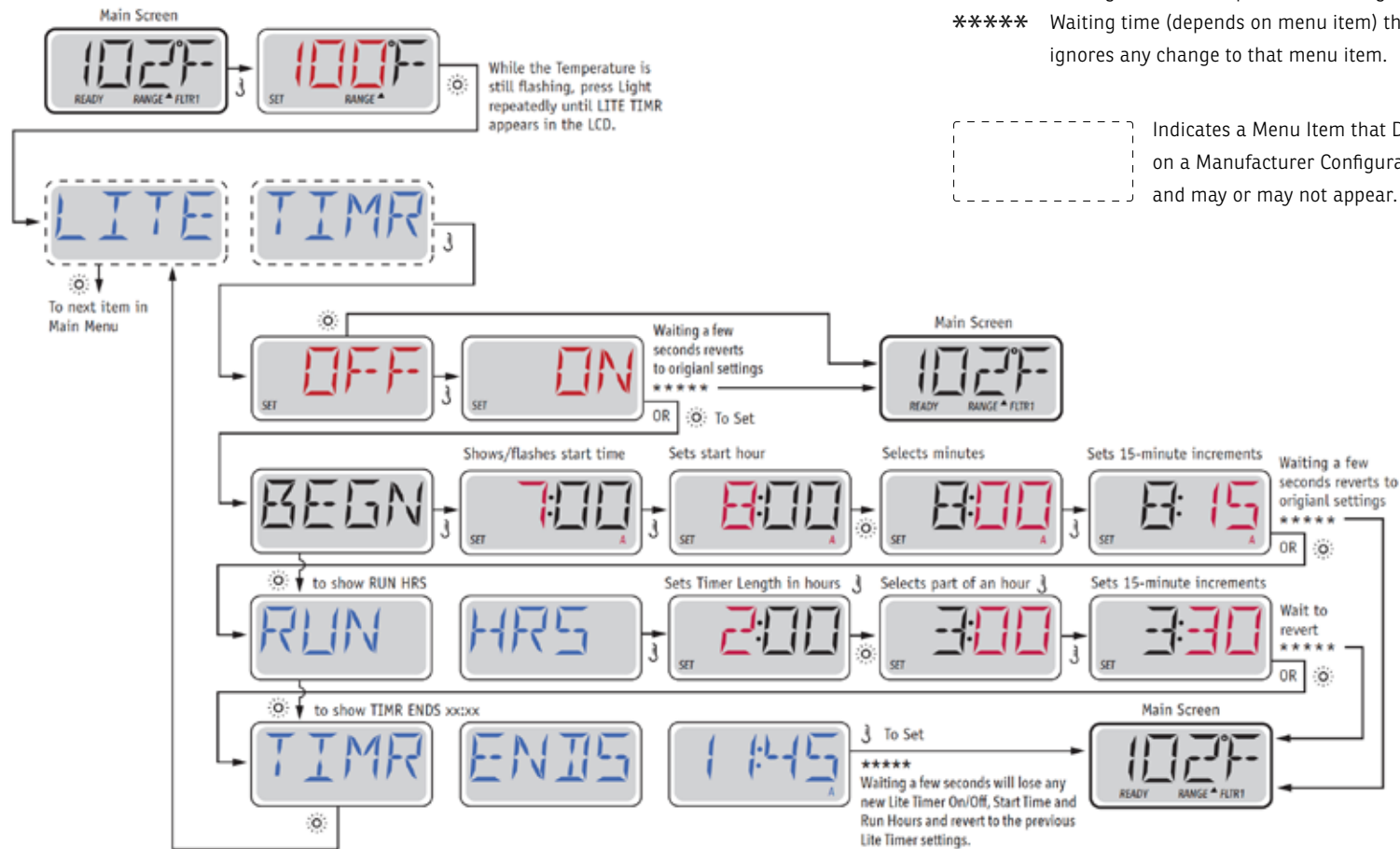
LIGHT TIMER

Light Timer Option

If LITE TIMR does not appear in the main menu, the light timer function is not enabled by the manufacturer.

If it is enabled, the light timer is set to „OFF“ by default.

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
-  A temperature button, used for "Action"
-  Light or dedicated "Choose" button, depending on control panel configuration
- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



PREFERENCES

F/C (Temperaturanzeige)

Wechselt die Temperatur zwischen Fahrenheit und Celsius.

F/C (temperature display)

Switches the temperature between Fahrenheit and Celsius.

12/24 (Time format)

Switches the time between 12-hour and 24-hour display.

RE-MIN-DERS (Reminders)

Sets the display of reminder messages (such as „Clean Filter“) to On or Off. Note: Reminders continue to run in the background even when they are not displayed. Setting the reminder messages to On or Off does not reset the reminder count.

CLN-UP (Cleaning)

The cleaning cycle is not always enabled, so it may not be displayed. When available, set how long pump 1 should run after each use. 0-4 hours are available.

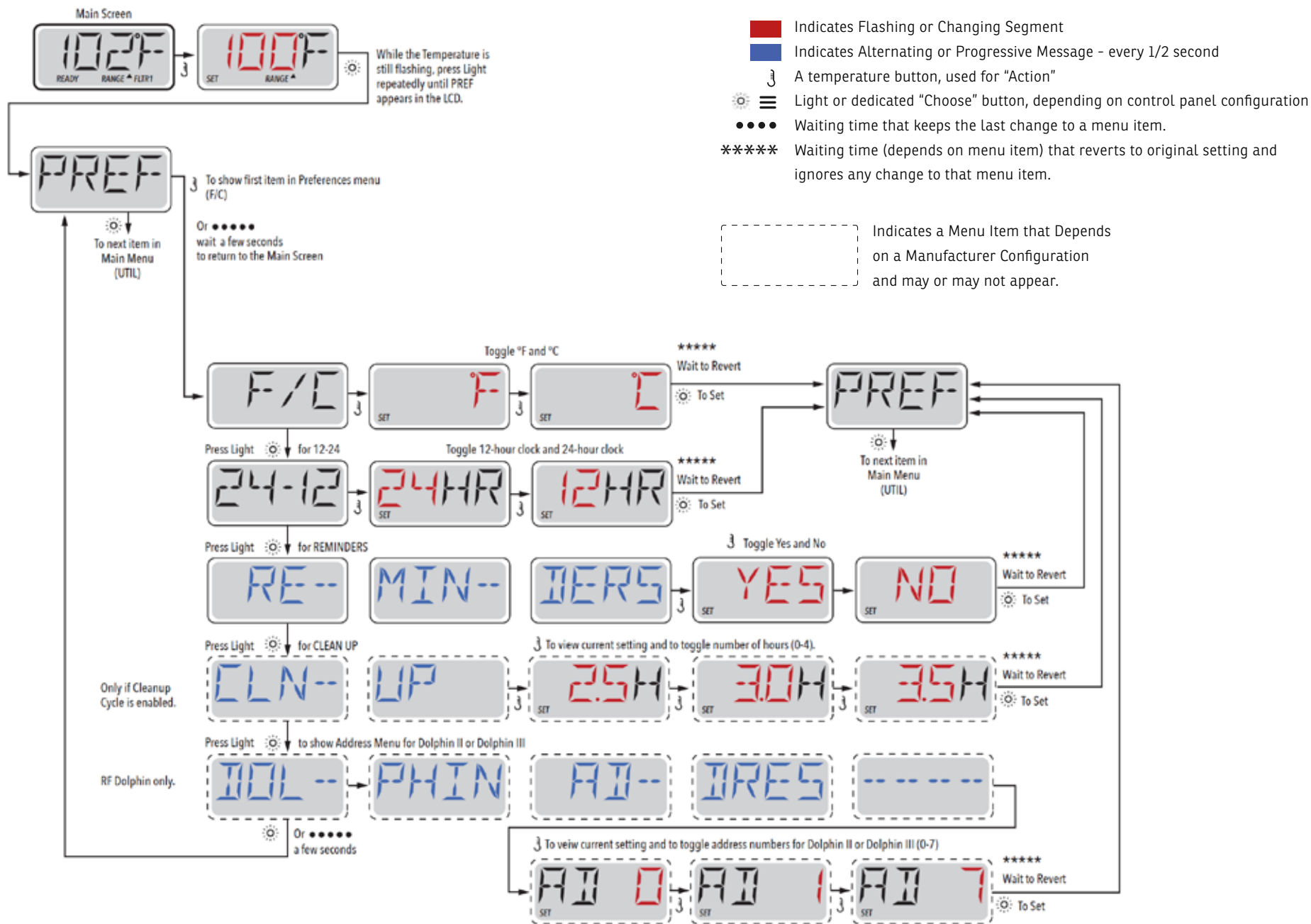
M8

(This message may not appear on all systems.) On systems that have M8, this is on by default. switched on by default. It can be disabled (or re-enabled) here. M8 reduces the polling intervals when the water temperature in the spa is stable. water temperature in the spa is stable.

DOL-PHIN-AD-DRES (Dolphin II and Dolphin III) only applies to RF Dolphin.

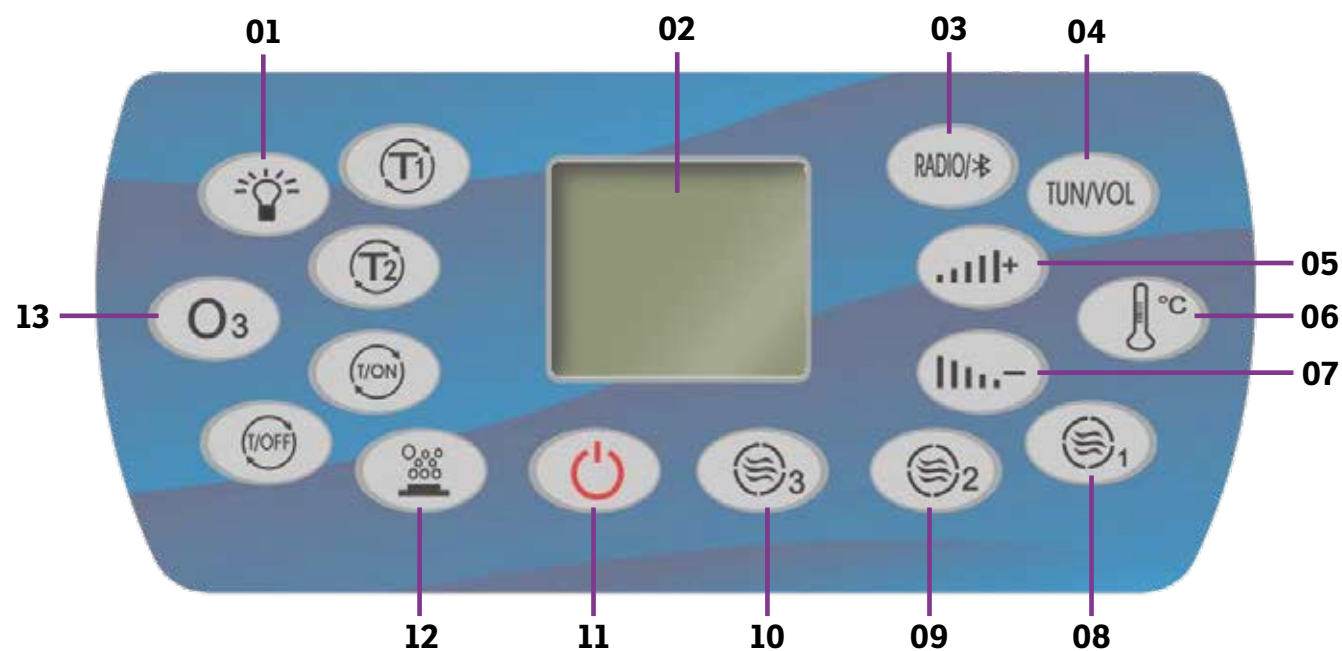
(This message may not appear depending on the configuration)

If set to 0, no addressing is used. Use this setting for a Dolphin remote control, which is set by default at the factory to operate without an address. If it is set between 1 and 7, this is the number of the address. (See Dolphin manual for more information).



STANDARD CONTROL

*The control module contains components that must not be serviced by the user. Do not attempt to service the control module yourself. Contact your dealer or customer service. For connection, follow the instructions in the operating manual exactly. Installation may only be carried out by an authorised electrician.
The earth wires must be properly connected.*



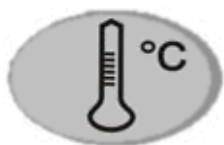
- 01.** Exposure
- 02.** Display
- 03.** Radio / Bluetooth
- 04.** Transmitter / Volume
- 05.** Increase (+)
- 06.** Temperature / Time
- 07.** Reduce (-)
- 08.** Pump 1
- 09.** Pump 2
- 10.** Pump 3
- 11.** Standby
- 12.** Bubble
- 13.** Ozone generator



Standby

If the whirlpool tub is connected, the control unit is immediately ready for operation (indicator light is permanently on).

The function of the circulation pump and the ozone disinfection system starts automatically (the display shows the symbols for the circulation pump and the ozone generator). Tap the key and the control unit is set to standby mode (the light indicator flashes permanently), all functions are switched off.



Temperature

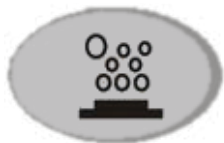
Press the button once to display the time.

Press the button a second time to display the last selected temperature. Use the 05. and 07. keys to set the temperature (7 - 42° C). The setting is applied automatically.



Pump

Press keys 1-3 to deactivate or activate the respective pump. The display shows whether the pump is active. Pumps 2 and 3 are not installed in every model.



Bubble function

Press the button to activate the bubble function. The bubble function is not built into every model.

**ALL PUMPS SWITCH OFF
AUTOMATICALLY AFTER
60 MINUTES.**

O₃

Ozone generator

The ozone generator only runs when the pump is switched on. If the pump is on, press the button to switch the ozone disinfection function on/off. The ozone function runs for 15 minutes and stops for 15 minutes alternately until you switch the function off manually.



Lighting

If the control unit is ready for operation, first press this button. The corresponding symbol appears in the display and the LEDs light up. The colours of the LEDs change automatically (15 seconds alternately). Press the key a second time to set a specific colour. Press the key a third time to switch it off. The LED lighting switches off automatically after 4 hours.

RADIO/⌘

Radio and Bluetooth

When the control unit is ready for operation, first press the key to switch on the radio function. The last selected radio station is shown in the display (in radio mode you can select stored radio stations with the „+/-“ keys). Press the key again to select the TV function (optional). The TV symbol appears in the display (in TV mode you can adjust the TV volume with the „+/-“ keys).

If you press the key for the third time, the Bluetooth function is switched on and a voice announcement sounds: „Bluetooth is ready for operation“. You can now connect your smartphone to the unit via Bluetooth. In Bluetooth mode, you can adjust the Bluetooth volume with the „+/-“ keys).

NOTE: This is a Bluetooth direct connection between the whirlpool tub control and the smartphone. The Bluetooth connection must be disconnected after each use, otherwise other devices will not be able to connect to the system's Bluetooth.



Transmitter / Volume

In radio mode, first press this button. The display shows a two-digit number. Use the „+/-“ keys to adjust the volume (the display shows the radio station again after a pause of 3 seconds). The volume goes from 0 - 60 dB.



By pressing the key again, the current frequency is displayed and flashes. You can set the frequency with the „+/-“ keys. After flashing three times, the setting is automatically saved. If you press the key a third time, stored radio stations are displayed.



Use the „+/-“ keys to select a saved station (the display shows the previous radio station again after 3 seconds). If you press the key for 5 seconds, the system automatically searches for a new frequency and stores it in consecutive order under a channel.

HEATING

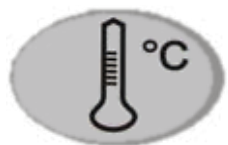
When the control unit is ready for operation, the heating function starts 10 seconds after the circulation pump is activated, unless the temperature sensor detects that the preset temperature is lower than the detected temperature. When the water temperature has reached the preset temperature, the heating function switches off automatically. If the temperature drops 2° C below the preset temperature, the heating switches on again automatically.

Automatic circulation

As soon as electricity is connected to your whirlpool tub, the water circulation starts, which initially circulates the water in the whirlpool tub for 1 hour. After 11 hours, the water circulation starts again for 1 hour.

PRIMING MODE

When your whirlpool tub is started up for the first time, some configuration information appears on the display. The whirlpool tub then sets itself to PRIMING MODE (state). The display shows „Pr“. The heating and all automatic functions are deactivated. This state remains for about 4 minutes, after which the heating element starts to heat up the whirlpool tub water and maintains the temperature in the standard setting. You can now exit „Priming Mode“ by pressing „TEMP“.



Knob for setting the temperature between 26° - 40° C

After a manual or automatic „OFF“, the set temperature is briefly displayed, then „-----“ appears on the display. When the water starts to flow, the current water temperature is displayed. If necessary, the heating switches on to heat the water to the desired temperature. The last measured temperature is shown continuously on the display.

The temperature that is displayed is only the current temperature if the pump has been in operation for at least 2 minutes.

Press the TEMP button once to display the currently set temperature. To change the set temperature again, press the TEMP button again before the display stops flashing. Each press of the TEMP button will then cause the temperature to either continue to decrease or increase. If you want to reach the opposite temperature, release the TEMP button and wait until the display shows the current temperature again. Then press the TEMP button again to display the set temperature and again to change the set temperature in the desired direction. After 3 seconds, the last measured temperature is automatically displayed. If it is necessary to heat, within a few seconds, „TEMP“ will appear on the display and light up for 6.5 seconds, then it will flicker for 90 seconds and remain lit until the set desired temperature is reached.

MODE SETTINGS

Step 1: Press the  TEMP button and then

Schritt 2: Press the  LIGHT button

The display now shows you either „ST“ (Standard), „EC“ (Economy) or „SL“ (Sleep) function.

Repeat steps 1 and 2 until you have switched on the desired function. The display automatically switches between the temperature display and the function display. In the standard function, you only see the temperature display.

Standard Mode is programmed to maintain the desired set temperature (heating up when needed). You must know that the last measured temperature shown on the display is only the current one if the pumps have been in operation for at least 2 minutes. The display shows „ST“ when you switch to standard mode.

Economy Mode is programmed to heat the spa to the desired temperature only during filter cycles. „EC“ will appear on the display when the temperature is not the current temperature and will alternate with the temperature when the temperature shown is the actual temperature.

Sleep mode heats the whirlpool at approx. 11° C temperature difference to the set temperature and only heats during the filter cycles. „SL“ is shown on the display if the temperature (temperature difference 11° C) shown is not the current temperature and alternates with the temperature display if the temperature shown is also the current temperature.

„Slp“ or „SL“ and the actual water temperature will alternate on the display until the water temperature reaches the set temperature (temperature difference 11° C).

EXAMPLE: If the control panel is in sleep mode with a set temperature of 40° C and an actual temperature of 28° C, the whirlpool tub will start heating during the filter cycle until it reaches the temperature of 29° C (11° C temperature difference).

The lowest temperature reached by the whirlpool tub in **sleep mode** is 15.5° C.


Understanding the whirlpool settings will help you to control the energy consumption. The heating element is the component that consumes the most energy. The different mode settings and the correct use of the pool cover will help you to control the energy consumption.

The „F“ filter cycles

The first filter cycle starts about 6 minutes after the whirlpool is switched on. The second filter cycle starts 12 hours later. The filter cycles can be programmed (2, 4, 6, 8 or 12 hours), indicated with „FC“. The default filtration cycles are 2 hours. The clock for the filtration cycles starts when the whirlpool tub is connected to the power. **Example:** If the whirlpool tub is started up at 08:00, a 2-hour filtration cycle starts 6 minutes later. 12 hours later, the next 2-hour filtration cycle begins. The cycle continues as long as the whirlpool tub is connected to the power supply. The various „MODE“ settings have no influence on the filtration cycles. You can vary the filtration cycles depending on how often you use the whirlpool tub.

At the beginning of each filtration cycle, the pumps are in operation for 5 minutes.

Setting the filter cycle


Step 1:  press the TEMP button

Step 2:  press the JETS button

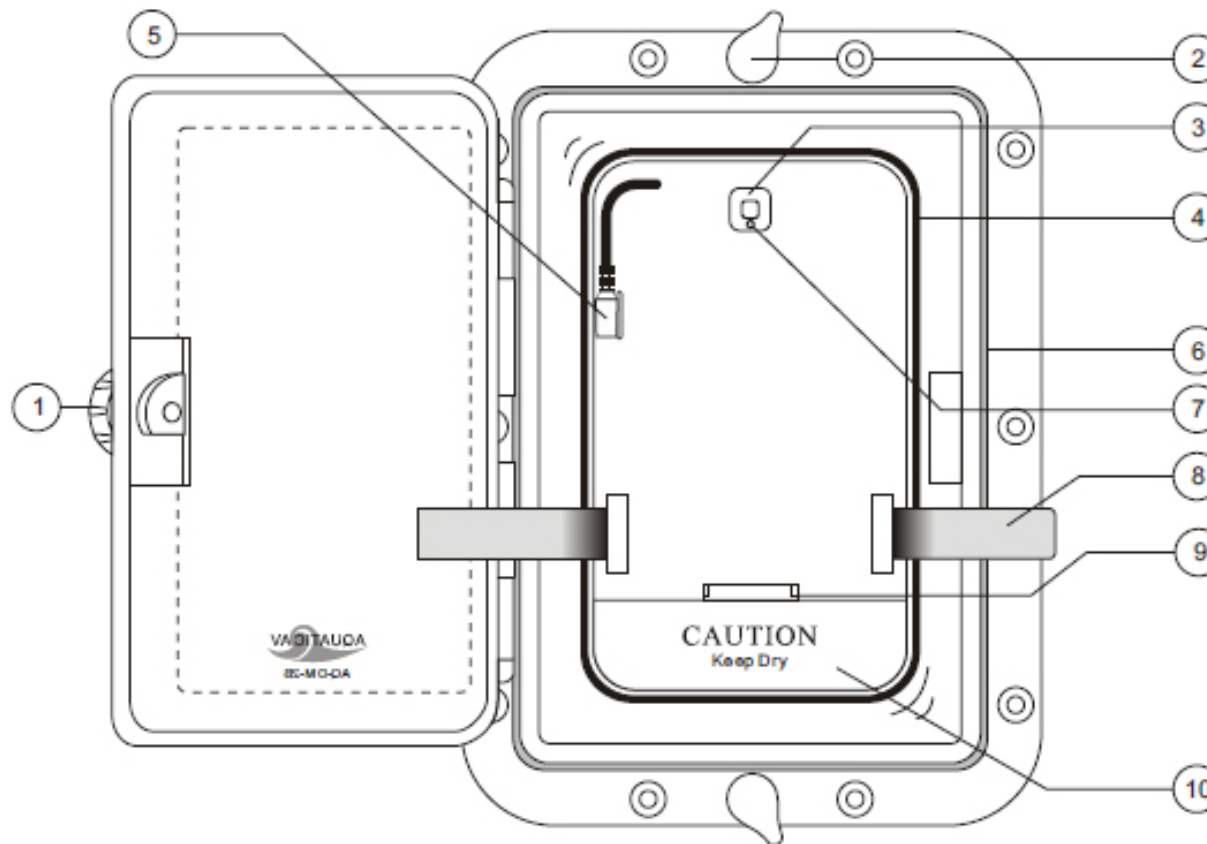
Step 3: Select filtration cycle

F2-2 hours-2 times a day
F4-4 hours -2 times a day
F6-6 hours-2 times a day
F8-8 hours- 2 times a day
F12-12 hours- 2 times a day (display „FC“ filtration is permanently on)

Step 4:  press the TEMP button to select between F2 and F12.













Schritt 5:  press the JETS button again to confirm the selected filtration time.

IPOD & MP3 DOCK



Description of the elements

1. Digi-dock handle and protective door
2. Secondary lock
3. Power ON/OFF button
4. Water/dust proof inner case
5. 3.5 mm connector for MP3 players
6. Gasket and drainage channel
7. Power ON/OFF LED
8. Security strip (for iPod/MP3 player)
9. iPod connector
10. iPod dock (with 5 adapters)

Button		FM Music Mode	FM Radio Mode
On/Off		Press once: switches from operation mode to standby Press and hold: switches from standby to ON mode	
Power supply unit 12V		Press once: Press and hold	
Volume +		Press once: volume +3 decibels Press and hold: faster	Press once: Volume + 3 decibels Press and hold: Increase volume faster
Volume -		Press once: volume - 3 decibels Press and hold: faster	Press once: Volume -3 decibel Press and hold: Lower volume faster
FM Radio		Press once: switches to FM radio mode Press and hold: no change	Press once: no change Press and hold: no change
Memory +		Press once: no change Press and hold: no change	Press once: increase the memory location Press and hold: no change
Memory		Press once: no change Press and hold: no change	Press once: change to memory mode Press and hold: no change
Memory -		Press once: no change Press and hold: no change	Press once: lower the memory location Press and hold: no change
Music		Press once: no change Press and hold: no change	Press once: switch between iPod/MP3 mode Press and hold: no change
Fast Rewind		Press once: last title Press and hold: fast rewind	Press once: -50kHz Press and hold: Search radio station
Pause/Play		Press once: Play/Pause Press and hold: Switch off iPod	Press once: mute Press and hold: no change
Fast fast forward		Press once: next track Press and hold: fast forward	Press once: +50kHz Press and hold: Search radio station

Before use

Please make sure that the following items are included in the delivery:

- a) AQ-DM-2Bx Digi-Dock
- b) Water/Dustproof RF Wireless Remote Control
- c) 10 Finishing Covers for stainless steel screws
- d) iPod Station (with 5 adapters)
- e) 10 stainless steel screws
- f) 2 CR-2032 batteries

Installation cable connection

Connection: The AQ-DM-2Bx requires a 12-pin connector. Depending on the country, this product may require an „optional“ connector.

FM Radio: The AQ-DM-2Bx receives both the USA and EURO FM frequencies. Please make sure that in both applications the FM antenna can be pulled out to the extreme to ensure good performance.

3. RCA inputs: The AQ-DM-2Bx is designed to use RCA based audio media.

Remote Control - RF LCD Wireless Remote Control

- A Remote control LCD
- B Remote control buttons
- C Insert battery here

If your music player is not an iPod, you will only be able to use the volume and ON/OFF buttons.

To prolong the battery life in the remote control, the LCD will turn off in 10 seconds if no other head is pressed. To turn the remote back on, press the ON button once and then press the desired setting.

Remove the remote control from the Digi-Dock. Loosen the screws of the waterproof cap on the back of the remote control. Place the battery in the remote control and replace the waterproof cap.



Please make sure that you only connect the player or disconnect the cable with dry hands.



Please always switch off the unit when it is not in use. This will extend the battery life.





The display of the remote control shows the following „--“ when it is switched on. The display will continue to show this sign until the radio or iPod mode is selected. This sign is also displayed if the distance is too great.

POWER ON button

To activate the Digi-Dock, press the ON/OFF button. When the unit is switched on, it will light up red. Digi-Dock, requires a 12V battery.




RF Wireless Remote Control Synchronisation

Each Digi-Dock is supplied with a matching RF Wireless remote control. All newly purchased remote controls must be activated or synchronised as follows:




- 1. Press and hold the  (Play/Pause) button on the remote control while pressing the  (Ein/Aus) button for two seconds. Pair" will appear on the display.
- 2. Switch on the Digi-Dock by pressing the power button within 10 seconds. A red light will turn on under the power button to indicate that the unit is turned on.
- 3. When synchronisation is complete, the display will return to the still image.

i If you lose your remote control and purchase a new one, you must also go through the above steps to use the remote control.

Play music - iPod:

- 1. switch on the Digi-Dock.
- 2. remove the plastic wrapping .
- 3. Connect your iPod to the iPod 30pin connector.
- 4. Make sure that your iPod is securely fastened with the tape provided.
- 5. secure the Digi-Dock water/dust resistant door.
- 6. Press and hold the button  on the remote control, to switch it on. The display will show .
- 7. Press  (Music) on the remote control to switch to Music mode.



Use the following buttons to be able to use the music mode completely.

Button	Press once	Press and hold
	Last title	fast rewind
	Play/Pause	fast forward
	Next title	iPod -Standby

MP3:


- Switch on the Digi-Dock.
- 2. connect the MP3 device to the 3.5mm connection point.
- 3. fix the MP3 device with the supplied tape.
- 4. secure the Digi-Dock water/dust resistant door.
- 5. RF Wireless remote control can only control the volume.

Volume control:






- 1. Press the button  once to increase the volume by 3 decibels.
- 2. Press the button  once to lower the volume by 3 decibels.
- 3. Press and hold one of the buttons mentioned earlier and the Digi-Dock will continuously increase or decrease the volume.

i When you use your iPod and switch to Radio or Standby mode, the iPod is automatically switched off. The screen will display the Charge Battery screen.





Listen to the radio: Mode Radio - FM Radio is only available in FM Radio mode.

FM radio mode to select: 1. Press  (FM Radio) on the remote control to switch to FM radio mode. When you listen to FM radio for the first time, this frequency 88.1 MHz will appear on the display.

Memory a radio station:


- 1. Press the button  once to switch to the mode save.
- 2. Press  or  to change the memory location.
- 3. Press and hold  to save the previously displayed radio frequency.
- 4. Press  once to switch to the main menu.

Play back stored radio frequencies:

- 1. Press  to enter the memory mode.
- 2. Press  or  to search for one of the stored frequencies.
- 3. Press  once to switch to the main menu.

Sleep mode: The Digi-Dock automatically goes into sleep mode if no commands are executed within 5 minutes. This increases the battery life.

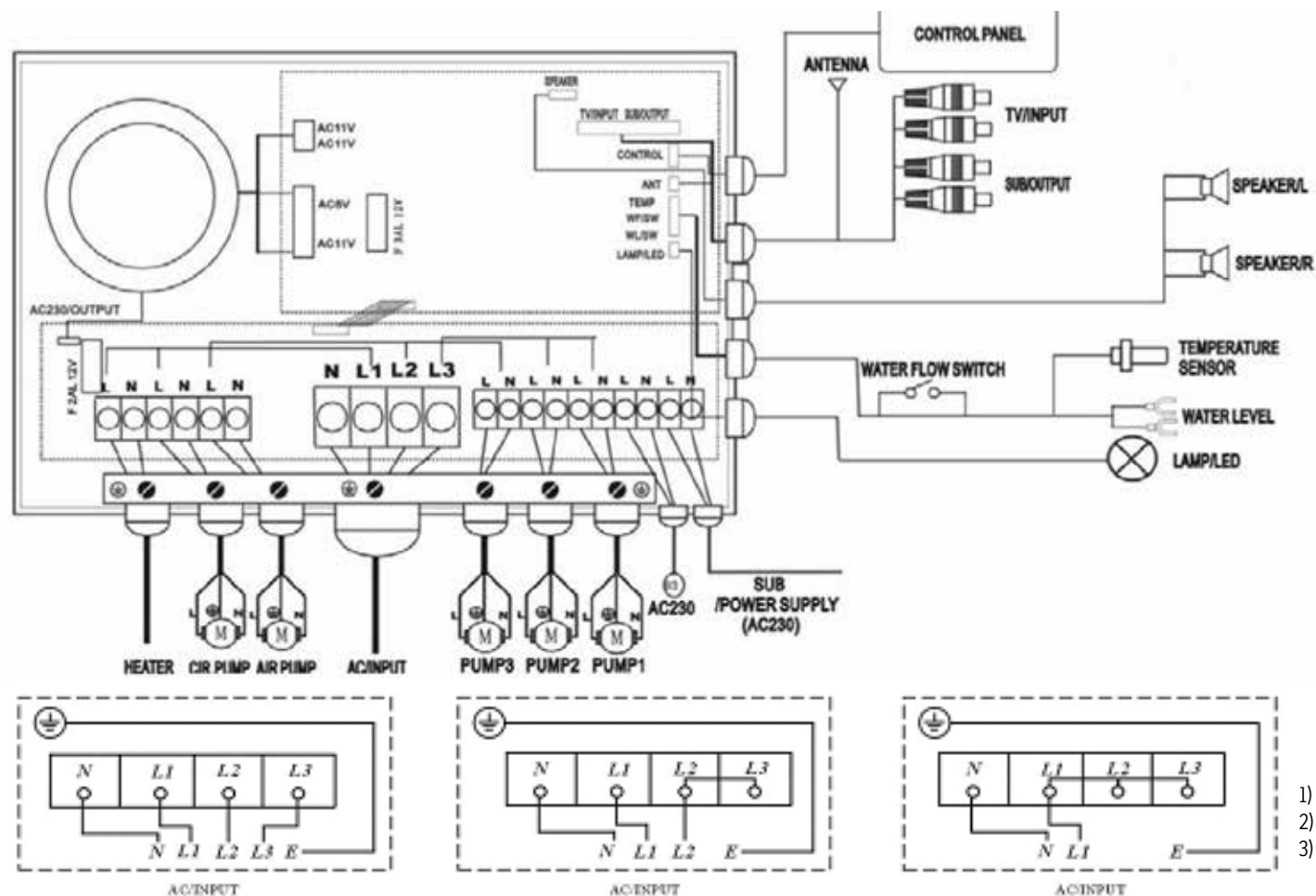
iPod - Charging: If you connect your iPod to the AQ-DM-2Bx 30pin connector, the iPod will charge. If the battery of your iPod is completely empty, the connection point of the Digi-Dock will not be able to charge your iPod either.

Remote control LCD Auto OFF: To increase the battery life of the RF Wireless remote control. The remote control display switches off within 10 seconds if no buttons are pressed. To reactivate the display, press  (Power) once to enter the main menu.

TROUBLESHOOTING

Type of fault	Cause	Solution
OH	Overheating. The water temperature in the whirlpool tub is above 43° C. All functions are stopped until the water temperature has dropped to 40° C.	Do not climb into the whirlpool. Open the cover. Press the T/ON button for 5 seconds to set the control to the correct mode. When the water temperature has dropped to 40° C, the system is ready for operation again. If the control unit of the whirlpool tub cannot be reset, please contact your local dealer or the customer service.
E0	The temperature sensor does not work or is not connected. The heating cannot be switched on like this.	Check whether the temperature sensor is connected or the plug is loose. If the problem persists, please contact your local dealer or customer service.
E1	The temperature sensor has a short circuit.	Replace the temperature sensor. If the problem persists, please contact your local dealer or customer service.
All symbols on the display flash permanently.	The water level is lower than the water level sensors in the whirlpool. The pumps and the bubble function cannot be switched on.	In this case, more water must be filled into the whirlpool tub until the water level is above the sensors. If the problem persists, please contact your local dealer or the customer service.
All functions switch on and cannot be switched off.	The water temperature is below 7° C, the frost protection function is active.	However, you can switch on the whirlpool and switch off all massage pumps and the bubble function.

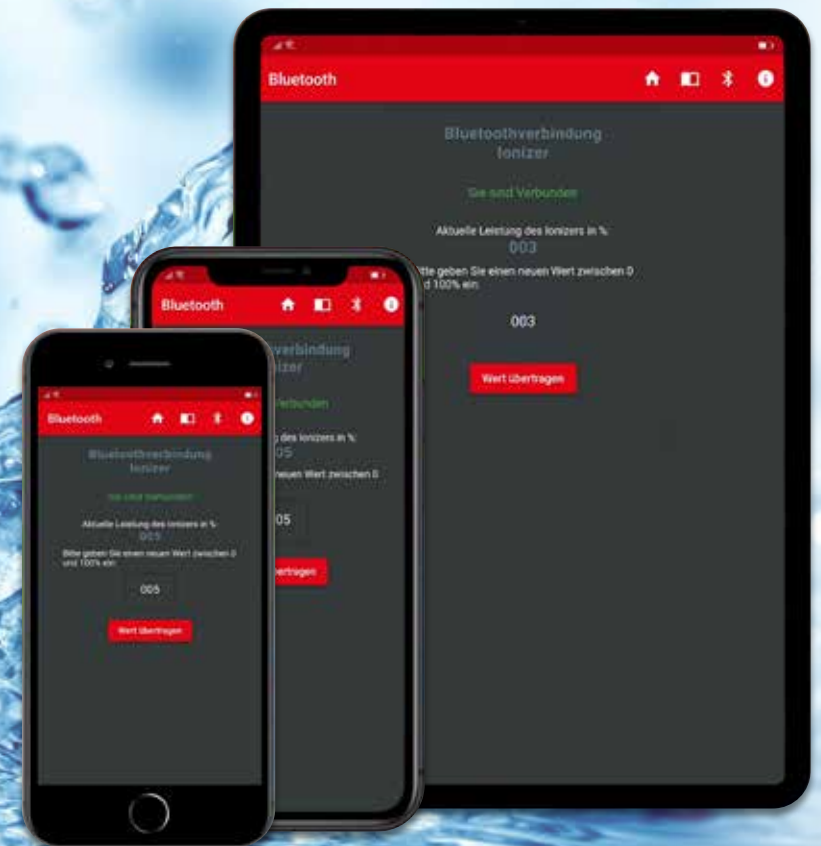
WIRING DIAGRAM CONTROL MODULE



- 1) Connection L1 L2 L3 N E (L-L:380V, L-N: 220V/230V)
- 2) Connection L1 L2 N E only (L-L:380V, L-N: 220V/230V)
- 3) Connection L N E only (L-N: 220V/230V)

1. max. Output for each phase: 16A
2. internal power supply, the cover may only be opened by electricians.
3. external power supply must be connected to earth (grounding).
4. observe the formal parameters in case of repair work.

WATER TREATMENT



Apple - App Store



Ionizer App 4+
Wasseraufbereitung
[Armin Schmid](#)
Entwickelt für iPad
Gratis

Google - Play Store



WHIRLPOOL



WASSERAUFBEREITUNG

Sonnenkönig - Ionizer App

Sonnenkönig of Switzerland Tools

3 PEGI 3

i This app is available for your device

GENERAL INFORMATION

To ionise the water for the first time, the power of the ioniser can be set to 100% for the first 1-2 days.

With 8 hours circulation of the water (running time of the circulation pump) and the associated operation of the ioniser, the ioniser should be set to approx. 3 - 6% power for a whirlpool (1000 - 2000 litres of water). It is then only necessary to change the ionizer output when refilling with fresh water.

The enrichment of the water with copper depends on many factors (pH value; temperature; state of wear of the cathode, set power of the ionizer). The copper content should be checked regularly and, if necessary, adjusted via the power of the ioniser.

Description of the inspection and maintenance work

Have repairs and maintenance work carried out by certified specialist personnel

The performance of the ioniser decreases over time due to the resulting oxidation process of the copper. Therefore, it is recommended to remove the oxide layer from the cathodes during a water change. Go through the following points step by step.

- Switch off the pool control system.
- Switch off the ioniser via the main switch.
- Remove the connecting lines on the cathodes (spanner size 10).
- Unscrew the threaded piece with the contaminated cathode pair using a suitable tool.
- Clean the cathode pair as far as possible, e.g. with a wire brush.

If the cathodes are too worn (brittle, heavily soiled or already too narrow), new cathodes can be obtained from a specialist dealer. Proceed in reverse order for installation. After cleaning the cathodes and filling the whirlpool tub with water, the ionizer can be operated at a high output of 100% for the first few days. The ionisation effect is significantly higher due to the cleaned cathode. As soon as a measurable copper content of between 0.5 and 0.8 ppm has set in, the output of the ioniser should be reduced to approx. 3 - 6 % (depending on the amount of water).

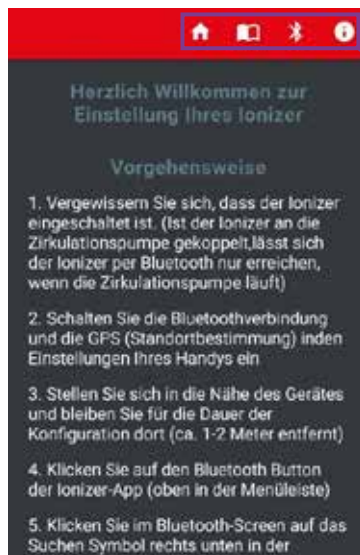


1. Registration

Enter the password and the user name:

Username: Sun

Password: X



2. App menu



Homepage



FAQ



Bluetooth connection



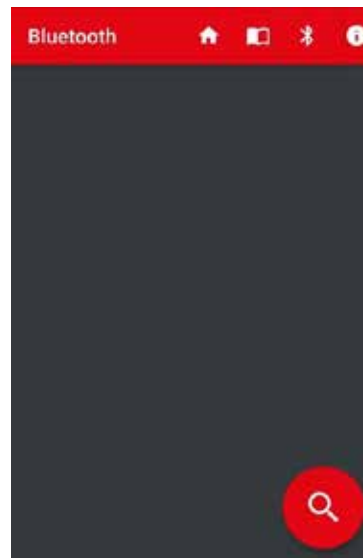
Information



3.FAQ

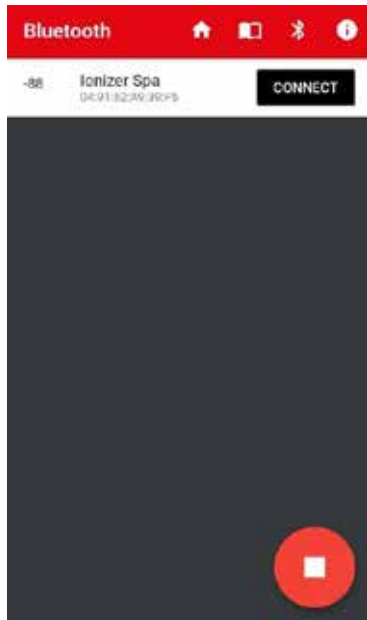
All relevant information about the ioniser and its use can be found in the app's FAQ.

4. Bluetooth connection



1. Activate Bluetooth and GPS (location) on your mobile phone.
2. Then click on the magnifying glass icon to search for your nearby device.
3. You must allow the app to access your location. This is necessary since Bluetooth 5.0.
4. If you do not see an Ionizer, make sure that you have turned on Bluetooth and GPS on your phone.
5. Make sure that the ioniser is switched on (the circulation pump must be running) and the main switch of the ioniser unit must be on.

6. Make sure they are in the immediate vicinity of the ioniser (approx. 1-2 metres).
7. Two users cannot access the unit at the same time.

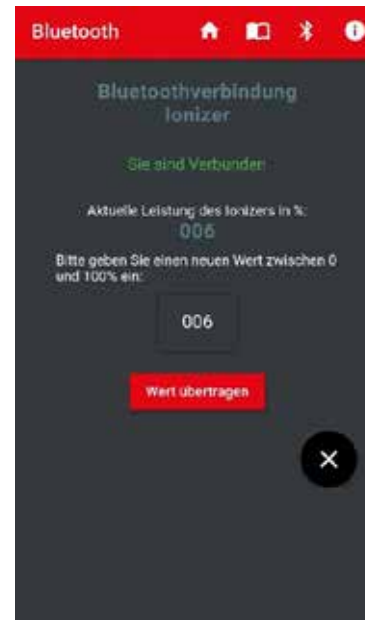


5. Connect device

Now click on the Connect button of the ioniser displayed.

The number, starting with a minus, shows you the signal strength.

The smaller the number, the better the connection and the closer you are to the unit.



6. Set power

As soon as you are connected, this is indicated by the sentence „You are connected“.

The currently set power of the ioniser is displayed in %.

If no connection can be established after several updates, please go through the chapter Troubleshooting.

A correct value entry is only possible with a successful connection.



By pressing the Connect button, the ionizer establishes a connection to your mobile phone via Bluetooth.

Depending on the signal strength, this takes a few seconds. Stay in close proximity to the Ionizer.



The power can be varied between 100 and 0 (0 -100%) can be varied.

To change the value, enter the new desired value in the value entry field and press „Transfer value“.

By clicking on the end button, you disconnect the connection to the ioniser again.

You can close the app as usual and switch off Bluetooth and GPS on your smartphone.

POOL CARE



Your whirlpool is a place of relaxation and well-being. It is therefore particularly important that the water is also clear, fresh and hygienically perfect so that you can enjoy your whirlpool without worry. With this guide, we want to show you that caring for your whirlpool water using the right products can be very simple and takes very little time. Our pool care offers the discerning whirlpool owner an optimally coordinated range of products for the care of his whirlpool.

WATER BALANCE

Although water always looks the same, water parameters such as the pH value or water hardness can vary greatly from region to region. Therefore, it is important to balance the water immediately after refilling to make regular maintenance as easy as possible.

Three parameters play an important role in this context: total hardness, alkalinity and pH. The total hardness is a measure of the content of mainly calcium and magnesium in the water. You can find out the value of the total hardness of your water from your local waterworks. If the value exceeds 200 mg/L, limescale can build up on the walls when the water is heated, resulting in rough surfaces. To prevent limescale deposits, use Kalkinex immediately after refilling.

Another value plays an important role in water care: the alkalinity (TA value). If it is too low or too high, the pH value fluctuates extremely and is difficult to adjust. This can cause damage to the whirlpool as well as irritation to the skin and eyes. The ideal TA value is between 80 - 120 mg/L. Check the TA value immediately after filling and then once a week. Dose directly into the whirlpool tub water.



PH-VALUE

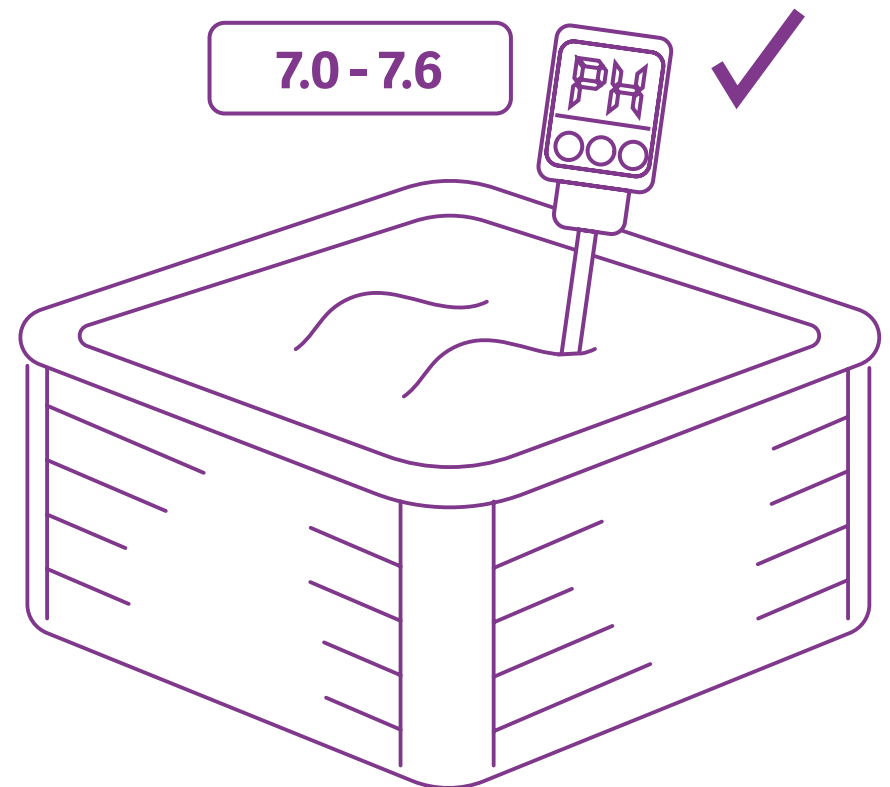
pH is a unit of measurement to measure the relative acidity in water, on a scale of 1 - 14. Check your spa water regularly to ensure the correct pH level. Pure water has a pH value of 7 and is neutral. Values above 7 are alkaline (base). Values below 7 are acidic. It is very important that the pH value is kept between 7.0 - 7.6.

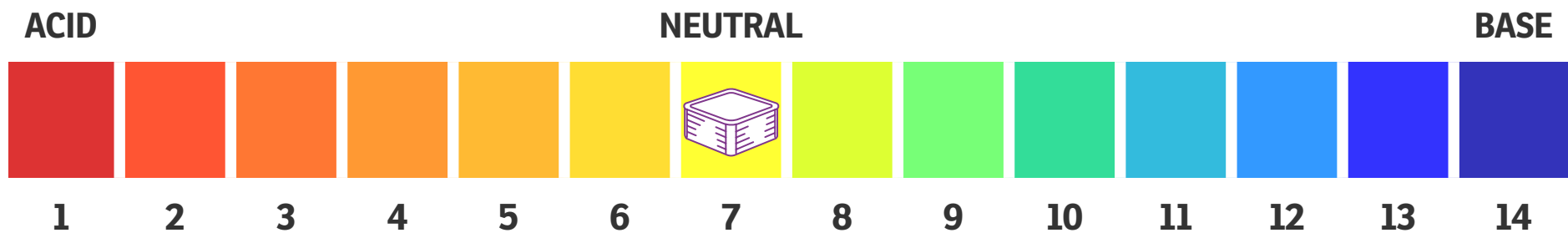
If the pH rises above 7.6, minerals or scales detach from the water and can clog pumps, filter cartridges and nozzles. The disinfectant works less effectively and the water can become discoloured.

If the pH falls below 7.0, the acidity of the water increases and the acid attacks the heating element and the linings of the nozzles. The disinfectant works less effectively and the acid attacks the skin.

The pH value is influenced by various factors:

- Number of users.
- How much new water is added.
- How many different chemicals are added.
- What type of disinfectant is used.
- Alkalinity and hardness or calcium content of the water.
- Water temperature and environmental effects.





Optimal values

pH value 7.0 – 7.6 pH

Total alkalinity 80-120 ppm

Water hardness (calcium) 150-300 ppm

Alkalinity

Total alkalinity is the measure of the highest level of carbonates, bicarbonates, hydroxides and other alkaline substances in the water, and the resistance of the water to the change in pH that this allows. Total alkalinity acts like a damper, preventing the pH from changing even though chemicals are added to the water.

Once the PH, alkalinity and water hardness have been determined, the value must always remain within the guideline values. Test the water regularly so that any fluctuations can be rectified. If the water is not within the recommended range, problems such as water turbidity, scaling, property damage or skin irritation may occur.

Safety data sheets

Warnings



If the alkalinity is too high, the pH value will be difficult to lower again.



If the alkalinity is too low, the pH value moves from high to low.

WATER CHEMISTRY

Understanding and correctly applying water chemistry is an important aspect of ensuring the quality and life of your pool. Improper use of chemistry can have various effects on the life of the spa, connecting tubes, jets, filter cartridge, heating element and pumps. Damage caused by inappropriate water is not covered by the manufacturer's warranty.



The chemicals needed to maintain a clean, disinfected spa are potentially toxic and dangerous if not used appropriately. Scan the QR code on the right or download any safety data sheet from our website www.sonnenkoenig.ch.

Here you will find instructions regarding the use and storage of the chemicals.

It is important to understand that the water in the whirlpool is different from normal water (e.g. in a swimming pool). In a whirlpool the water is heated to between 36 - 40° C. This is much warmer and more turbulent than in a swimming pool. Therefore it also needs a different treatment. It is important to test the water. If you keep the water in balance, many problems that can arise due to incorrect treatment will be avoided.

Safety data sheets

Warnings



General safety instructions for Pool-Chemie

- Before using the chemicals, carefully read the package leaflet and application guidelines.
- Keep the chemicals away from children.
- Pay attention to the expiry date of your chemicals.
- Use only the original lid and make sure it is always tightly closed when the chemical is not in use.
- Chemicals must not be stacked.
- Store the chemicals in a clean, dry and well-ventilated room to prevent contamination by other substances. Keep the whirlpool chemicals away from garden equipment and lawn care products such as lawn fertiliser.
- Separate chemicals with different states of aggregation.
- Do not store the chemicals in rooms where you also store other flammable objects or agents.
- Never mix two chemicals. Use a clean, new spoon for each chemical and prevent old chemicals from mixing with new ones.
- Follow the operating instructions.
- Never add the chemicals while people are in the whirlpool.
- If parts of the chemicals are spilled, remove the residue with plenty of water.
- Dispose of the chemical containers in an environmentally conscious manner and in accordance with local and national regulations.
- Do not breathe in dust or vapours from the chemicals.

POOLCARE

Clean and crystal clear pool water is a prerequisite for every pool owner. With POOL CARE products from Sonnenkönig of Switzerland, you are always on the safe side when it comes to pool water quality.

- Water balance, pH / TA correction
- Disinfection
- Anti-algae, flocculant
- Cleaning and accessories



WATER ANALYSIS

At first glance, whirlpool water care seems time-consuming and complicated and complicated: too many products and too many rules. However, once you have familiarised yourself with the details, you will quickly realise that the maintenance effort is minimal, because only a few rules need to be carried out regularly, others only as required.

The basic rules are the correct pH value and a basic disinfection of the water. The corresponding values can be checked easily and quickly with the pool tester + test strips. If you follow these two rules without interruption, you will automatically avoid problems with the water treatment. Therefore our request to you:

Get into the habit of a regular routine and, if possible, always carry out the steps on a specific day. This way you won't lose track of what's going on and you can manage the time you need to do it.

The practical service plan will help you by entering the date of your „maintenance day“ and hanging it up near your whirlpool tub.



PH-regulation / Multireiniger cover

The pH value is the basis for a functioning disinfection. Only when it is correctly adjusted do the care products used have an optimal effect and the water is pleasant to the skin, hair and eyes. The ideal pH value is between 7.0 and 7.6.

The pH value is influenced by various factors. For example, it increases after adding fresh water. Increasing the water temperature or enriching the water with air through the bubbling effect also changes the pH value. Therefore, check the value at least once a week and correct it downwards with pH-Minus if necessary. The granulate is dosed directly into the whirlpool water.



We recommend our doser for correct application.

Safety data sheets
Warnings



MULTIREINIGER COVER is a neutral all-purpose cleaner with a wide range of application possibilities. Stubborn dirt that appears on the plastic surface of spas, hot tubs and swimming pool covers can be conveniently removed with our Multi-reiniger. Other materials in the wellness environment can also be cleaned with the multi cleaner.

RECOMMENDED
PROTECTIVE CLOTHING:



DESINFEKTION

Once the whirlpool water is in balance, the next important step comes: water disinfection. Although the water is disinfected - depending on the care method - directly before or after each bath, you should still carry out a basic treatment using Wasserklar every week.

Wasserklar provides basic disinfection and supports the disinfectant used. It provides a basis of water care regardless of how often the whirlpool is used and thus prevents disinfection gaps. The special formula destroys chloramines, which are responsible for chlorine odour and eye irritation. Wasserklar also contains substances that make your whirlpool tub water crystal clear. Another advantage is that you can use your whirlpool again just 15 minutes after adding it.

Wasserklar is a preventive treatment which only ensures that there are no problems with your whirlpool tub water care if it is used regularly. Dose the granulate regularly every week directly into the water, regardless of the intensity of use of your whirlpool tub.

This product can be used with all three care methods: chlorine, chlorine-free based on active oxygen or bromine.

RECOMMENDED PROTECTIVE CLOTHING:



Safety data sheets

Warnings



To protect your health, your whirlpool water should be continuously and sufficiently disinfected. This is particularly important in whirlpools, as the high water temperatures provide an ideal environment for bacterial growth. In order to prevent problems with water care, a sufficient amount of disinfectant must therefore be present in the water at all times.

The weekly basic treatment with Water-Clean already offers a certain protection against bacteria or contamination. However, this basic protection must be reinforced each time the whirlpool is used. You can choose between the following three methods: Disinfection with chlorine, chlorine-free based on active oxygen or bromine.



We recommend our doser for correct application.

MiniChlor for reliable water disinfection with immediate effect

Chlorine in granulate form is the traditional disinfection method for whirlpools. MiniChlor dissolves quickly and without leaving any residue and does not leave any bleach stains on surfaces. The granulate is pH neutral, i.e. the pH value of the water does not change when added.

What to do?

- Check the pH value with test strips at least once a week and adjust it to 7.0 - 7.6 if necessary.
- Add 5 g/m³ MiniChlor after each bath. Let the filtration run for 10 minutes and then check with test strips whether the ideal value of 1.0 - 1.5 mg/L has been reached. If necessary, add further quantities. Dose directly into the whirlpool water.

Safety data sheets Warnings



Use biocides carefully.
Always read the label and product information before use.

RECOMMENDED
PROTECTIVE CLOTHING:



Bromine tablets for the odourless Water disinfection with permanent effect

Bromine tablets are just as effective as chlorine, but have a low odour. The tablets are slowly soluble and thus ensure continuous disinfection of your whirlpool water over a longer period of time.

What to do?

- Check the pH value with test strips at least once a week and adjust it to 7.0 - 7.6 if necessary.
- Add 3 - 4 bromine tablets per m³ every 10 - 14 days. Let the filtration run for several hours and check afterwards with test strips if the ideal value of 3.0 - 5.0 mg/L has been reached. If necessary, add more tablets.



*We recommend our
doser for correct applica-
tion.*

Active oxygen for chlorine-free and gentle water disinfection

Active oxygen gently disinfects your whirlpool water. By using this absolutely chlorine-free method, the water feels particularly natural and pleasant, is gentle on skin and hair and odourless.

What to do?

- Check the pH value with test strips at least once a week and adjust it to 7.0 - 7.6 if necessary.
- Add 10 g of active oxygen granulate per m³ before each bath. Let the filtrations run for approx. 10 minutes and check immediately afterwards with test strips whether the ideal value of 5 - 8 mg/L has been reached. If necessary, add further quantities.

RECOMMENDED
PROTECTIVE CLOTHING:



Safety data sheets
Warnings

Use biocides carefully.
Always read the label and product information before use.



CLEANING

Every whirlpool is equipped with a circulation pump. It moves the water and guides it through the filter. Among other things, this helps to ensure that the dosed water care products are distributed evenly and can act everywhere. Run the circulation according to your whirlpool tub manufacturer's instructions.

A well-functioning filter helps to keep the water clean by retaining contaminants. However, if the filter is not maintained, it will become clogged and its function will deteriorate drastically. The result is poor water quality and increased consumption of disinfectants. We recommend that you clean the filter cartridge every four weeks at the latest.

What to do?

- Remove the filter cartridge from the filter box of your whirlpool tub and first clean it of coarse dirt.
- Dissolve the entire contents of a bag of Cartridge Clean in a half-filled 10-litre bucket.
- Place the cartridge in the cleaning solution.
- Swivel it several times at intervals and remove it from the solution after approx. 5 hours, depending on the degree of soiling.
- Then rinse the cartridge again and let it dry before inserting it.

To further increase the filter effect, add Wasserklar. This product ensures that the smallest turbid substances, which are not normally retained in the filter, are enlarged and thus made filterable.



RECOMMENDED
PROTECTIVE CLOTHING:



Safety data sheets
Warnings



Regular draining and refilling with fresh water is an important part of whirlpool tub care, because over time the water accumulates minerals, chemicals and other substances. These make the water look lifeless and impair the effectiveness of the care products.

To determine a guideline for the number of days after which you should completely empty your whirlpool tub and refill it, use the following formula:

Water volume in litres ÷ average number of bathers per day ÷ 3 = number of days until next water change.

Example: Whirlpool with 1,500 litres of water with an average of 4 bathers per day = $1,500 \div 4 \div 3 = 125$ days.

However, the water should be changed after 3-4 months at the latest.



Safety data sheets
Warnings



What to do?

- Use the formula to calculate how often your water should be changed.
- Then drain the water completely.
- Clean all surfaces with Multireiniger Cover using a cloth or viscose sponge.
- Fill your whirlpool tub with fresh water.
- Do not forget to clean the whirlpool tub cover thoroughly as well.

Is the water foaming?

Foam on the water surface does not look very inviting. If your water tends to foam, we recommend adding Anti Foam directly to the water. If the water still foams after the addition, it should be changed.

**RECOMMENDED
PROTECTIVE CLOTHING:**



TROUBLESHOOTING

If a problem has occurred with the water quality, you should generally check:

- Is the pH value OK?

Ideal pH value: 7.0 to 7.6

- Is there sufficient disinfection in the water?

Ideal chlorine value: 1.0 - 1.5 mg/L

Ideal bromine value: 3.0 - 5.0 mg/L

Ideal active oxygen value: 5 - 8 mg/L

- Is the filter clean?

Clean or replace the cartridge.

- Is the circulation system in order?

Is the filter pump running according to the manufacturer's recommendation?

PROBLEM	POSSIBLE CAUSE	PROPOSED SOLUTION
Turbid water	<ul style="list-style-type: none"> • Dirt particles that cannot be retained in the filter. • Too many organic pollutants. • Too little disinfectant in the water. 	<ul style="list-style-type: none"> • Check pH value and adjust to 7.0 - 7.6. Add Wasserklar to achieve immediate disinfection. Clean or replace filter cartridge.
Too much chlorine or bromine in the water	<ul style="list-style-type: none"> • Overdosing of disinfectants. 	<ul style="list-style-type: none"> • Wait with bathing until the value has reduced by itself. Determine the current value with the Teststreifen.
Foaming	<ul style="list-style-type: none"> • Contamination of the water by soap and cosmetic residues. 	<ul style="list-style-type: none"> • Add Antischaum to the water. If the water still foams after adding it, the water should be changed. For the future, residues of soap or cosmetics should be thoroughly washed off the body before using the whirlpool.
Limescale deposits or Limescale residues in the water	<ul style="list-style-type: none"> • Hard water with high calcium content. • pH value too high. • Alkalinity too high. 	<ul style="list-style-type: none"> • In case of hard water, add Kalkinex directly after filling. In all cases, adjust the pH value to 7.0 - 7.6 with pH-Minus.

WARRANTY / DISPOSAL TECHNICAL MODIFICATIONS

Warranty

The units are thoroughly checked before delivery. Should a defect nevertheless occur on your unit, please contact your seller with confidence. Please bring the proof of purchase with you, as this must be presented for any warranty service.

The guarantee is from the date of purchase:

Electronics & control: 2 years

Housing: 5 years

Acrylic tub: 5 years

Disposal

The appliance must be disposed of properly and at the owner's expense.

Technical changes

Subject to changes in technology, design and errors excepted.



2 Jahre auf Elektronik und Steuerung
2 ans sur l'électronique et le système de commande
5 Jahre auf Gehäuse
5 ans sur le châssis
5 Jahre auf Acryl-Wanne
5 ans sur le bassin acrylique



Montage, Service und Unterhalt
Montage, service et entretien
Assembly, service and maintenance

Imprint:

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Design: Company Sonnenkönig of Switzerland, Ulisbach

Pictures: Company Sonnenkönig of Switzerland, Ulisbach



DISPOSAL INSTRUCTIONS FOR THE ELECTRICAL PART OF THE PRODUCT

Pursuant to Article 26 of the Legislative Decree of 14 March 2014 transposing Directive 2012/19/EC and the Law of 4 March 2014 transposing Directive 2011/65/EC on the reduction of the use of hazardous substances in electrical and electronic equipment and on waste management.

The symbol of the crossed-out dustbin on the appliance or packaging indicates that the waste generated at the end of its useful life must be collected separately from other waste. The user must therefore take the appliance to the appropriate collection points at the end of its life. Sort electronic and electrical waste or return it to the retailer the purchase of new, equivalent equipment on a one-to-one basis. L'adeguata separate collection for subsequent commissioning of the equipment to be recycled, treatment and environmentally sound disposal, helps prevent any possible negative impact on the environment and health and promote the reuse and/or recycling of the materials to which they belong. composed the equipment. Misuse of this product by the user will result in application of the administrative penalties provided for in current legislation. Rechargeable batteries or batteries contained in the equipment must be disposed of separately, in the appropriate containers for the collection of used batteries.



DISPOSAL OF BATTERIES AND ACCUMULATORS

According to Legislative Decree 188 of 20 November 2008 implementing Directive 2006/66/EC on batteries, accumulators and related waste, the symbol of the crossed-out wheeled bin on the battery indicates that it is prohibited to dispose of waste batteries in household waste.

Batteries and accumulators contain highly polluting substances. The user is obliged to dispose of used batteries at the collection points in the municipality or in the appropriate containers. The service is free of charge. In this way, the legal requirements are met and the environment is protected. The symbols used to identify hazardous substances that may be contained in batteries and the batteries are as follows: Hg= mercury, Cd= cadmium, Pb= lead.