



User Instruction Manual

For You and Planet Blue

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Safety Instructions

READ AND FOLLOW ALL INSTRUCTIONS

Read and follow all instructions.

Keep this manual for future reference.

The BWT DIAMOND MINERALISER is a plug-in pool equipment controller. It must be installed and used in accordance with this manual and all applicable electrical and pool safety requirements.

Professional Installation Required

This product must be installed and serviced by a qualified pool equipment technician or licensed professional.

- Incorrect installation or operation may result in equipment damage, personal injury, or electric shock.
- The installer must provide this manual to the owner or operator after installation.
- Do not modify the power cord, plug, enclosure, cell cable, or internal wiring.
- Always isolate power before servicing, cleaning, or disconnecting equipment.

Electrical Safety

- Connect the Mineraliser only to a suitable **240 V AC weather-protected power outlet**
- The Mineraliser and connected equipment must be located at least 3.5m from the pool edge.
- The outlet must be protected by a **Residual Current Device (RCD) rated at no more than 30 mA**
- Do not use extension leads, double adaptors, or power boards.
- Do not operate the unit if the power cord, plug, outlet, or enclosure is damaged.
- Keep the plug, outlet, and electrical connections dry and protected from water spray, flooding, and chemical fumes.

Installation Safety

- Install the control unit outside the pool zone and in accordance with applicable electrical safety requirements.
- Do not install the unit where it may be exposed to flooding, impact damage, or excessive heat.
- Do not install the unit in an enclosed space without adequate ventilation.
- Do not operate the system unless the cell housing is correctly installed and water flow is present.

Children and Vulnerable Persons

This appliance may be used by children aged **8 years and older**, and by persons with reduced physical, sensory, or mental capabilities, only when supervised or instructed in safe use.

- Children must not play with the appliance.
- Children must not clean, service, or maintain the system.

- Keep chemicals, probes, dosing lines, and electrical connections out of reach of children.

Chemical Safety

Where the optional **Diamond Dose** acid dosing system is installed:

- Follow the chemical manufacturer's handling instructions.
- Wear suitable eye and skin protection when handling acid.
- Store chemicals in a safe, ventilated area away from electrical equipment.
- Never mix chemicals.
- Check dosing lines and fittings regularly for leaks or damage.

Important

Failure to follow these instructions may result in unsafe operation and may affect warranty coverage where the failure caused or significantly contributed to the fault, damage or cost claimed.

System Overview

The **BWT DIAMOND MINERALISER** is a salt and mineral chlorination system designed to manage daily chlorine production and support automated pool equipment control. The system produces chlorine through the electrolysis cell and can be expanded with optional accessories for pH control, ORP-based chlorine control, equipment automation, and remote access.

1. Main Components

A standard DIAMOND MINERALISER kit includes:

- **Control Unit** — manages chlorination output, timers, system settings, and connected equipment.
- **Electrolysis Cell** — produces chlorine from salt or mineral salts in the pool water. Cell sizes range from **15g to 100g**, depending on the model.
- **Cell Housing and Fittings** — includes the clear cell housing, barrel unions, O-rings, and pipe reducers for plumbing installation.
- **Mounting Hardware** — includes the stainless-steel mounting bracket and screw kit.

Optional accessories, such as the **Diamond Dose** and **Diamond Hub**, may be fitted depending on the installation.

2. Chlorination Control

The DIAMOND MINERALISER allows chlorine production to be adjusted to suit pool size, usage, weather conditions, and water test results.

- Chlorine output can be manually adjusted from the control unit.
- The system produces chlorine only when water flow is detected.
- Regular manual water testing is still required to confirm correct chlorine, pH, salt, and stabiliser levels.

3. Optional pH and ORP Control

pH and ORP control are only available when the system is fitted with the **Diamond Dose add-on** and compatible probes.

When installed and enabled:

- **pH control** can automatically dose acid to help maintain the selected pH setpoint.
- **ORP control** can automatically start or stop chlorine production based on the water's measured oxidising potential.
- Probe readings must be checked regularly against pool water testing to maintain accurate operation.

4. Installation and Positioning

The system must be installed by a qualified professional to ensure safe operation and maintain warranty coverage.

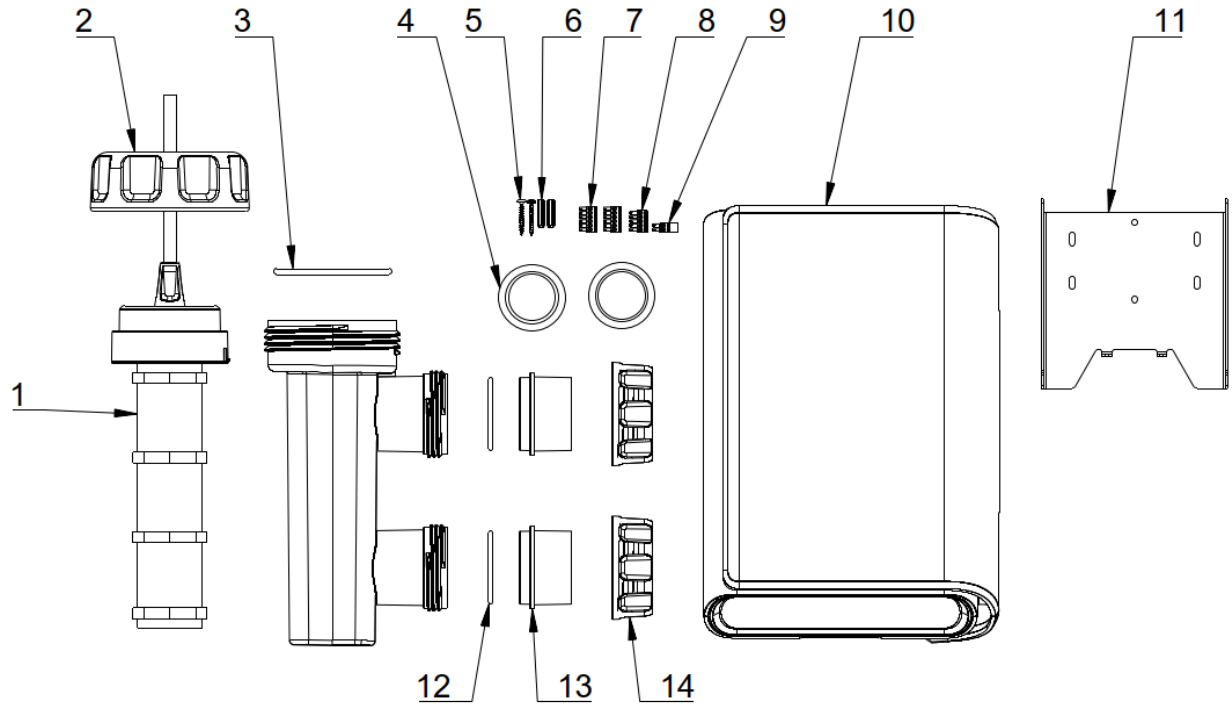
- Mount the control unit at least **1 metre above ground level**.
- Install the control unit at least **3.5 metres from the pool edge**.
- Choose a well-ventilated location, protected from direct sunlight where possible.
- Plumbing must be installed so water enters the cell housing from the correct direction, allowing the flow sensor to operate correctly.

5. Safety and Compliance

Installation must comply with applicable electrical and pool equipment standards.

- Electrical work must be completed by a licensed professional.
- The system must be protected by an RCD rated at no more than **30 mA**.
- Children must not clean or maintain the system.
- Always isolate power before servicing the equipment.

Contents of this kit



1	Chlorinator Cell
2	Cell Screw Cap
3	Cell O-Ring
4	50-40mm Reducer (2)
5	Mounting Bracket Screw (2)
6	Masonry Wall Anchor (2)
7	Relay Connector - Fitted (2)
8	VS Pump Connector - Fitted
9	Flow Switch Jumper - Fitted
10	Mineraliser Chlorinator
11	Chlorinator Mounting Bracket
12	Union O-Ring (2)
13	Union Tail 50mm
14	Union Lock Nut
	Quick Start Guide
	User Manual
	Warranty Statement

Optional Accessories

The DIAMOND MINERALISER can be expanded with optional accessories to provide additional control and automation features.

Optional accessories may not be included with every system. Availability depends on the model, installation and system configuration.

Optional accessories should be installed and configured by a qualified pool equipment technician or installer.

Diamond Dose Acid Doser

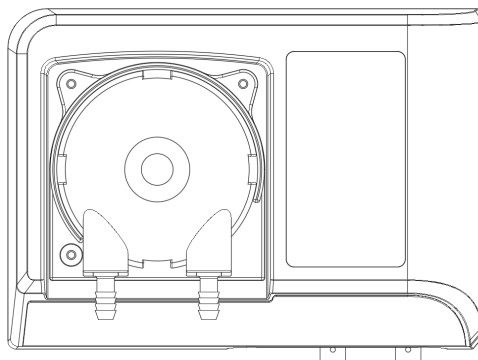
Diamond Dose allows the Mineraliser to control acid dosing for pH management.

When Diamond Dose is installed, the Mineraliser can dose diluted pool acid to help reduce pH. Depending on the installed sensors and setup, acid dosing can operate in:

- Timed Mode.
- Auto pH dosing, where a compatible pH probe is installed.

Diamond Dose may also be used with ORP control where compatible probes are installed.

Diamond Dose operation is covered in the **Acid Dosing and pH Control** section.



Diamond Dose acid doser

Diamond Hub Automation Accessory

Diamond Hub expands the number of equipment outputs available to the Mineraliser.

A Diamond Hub can provide additional outlets, relays and valve actuator outputs for pool equipment automation.

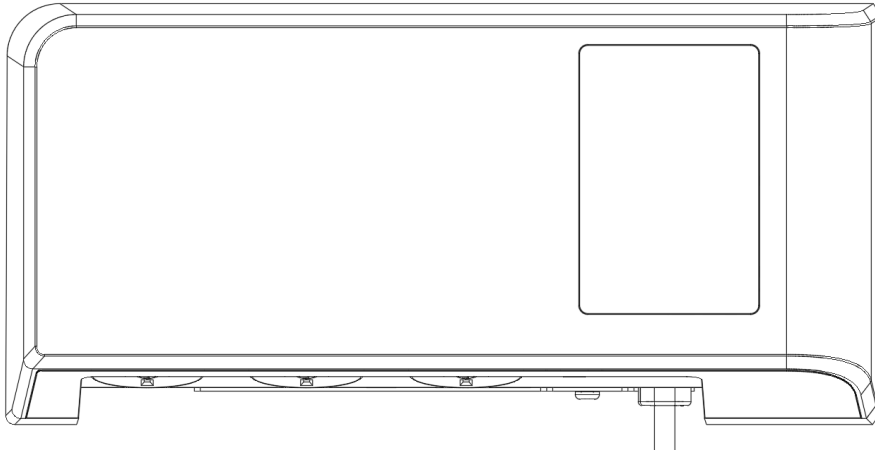
Diamond Hub outputs may be used for equipment such as:

- Pool lights.
- Water features.
- Boost pumps.

- In-floor cleaning pumps.
- Heaters.
- Additional valves.
- Other compatible pool equipment.

Up to three Diamond Hubs can be connected to the Mineraliser, depending on the installation.

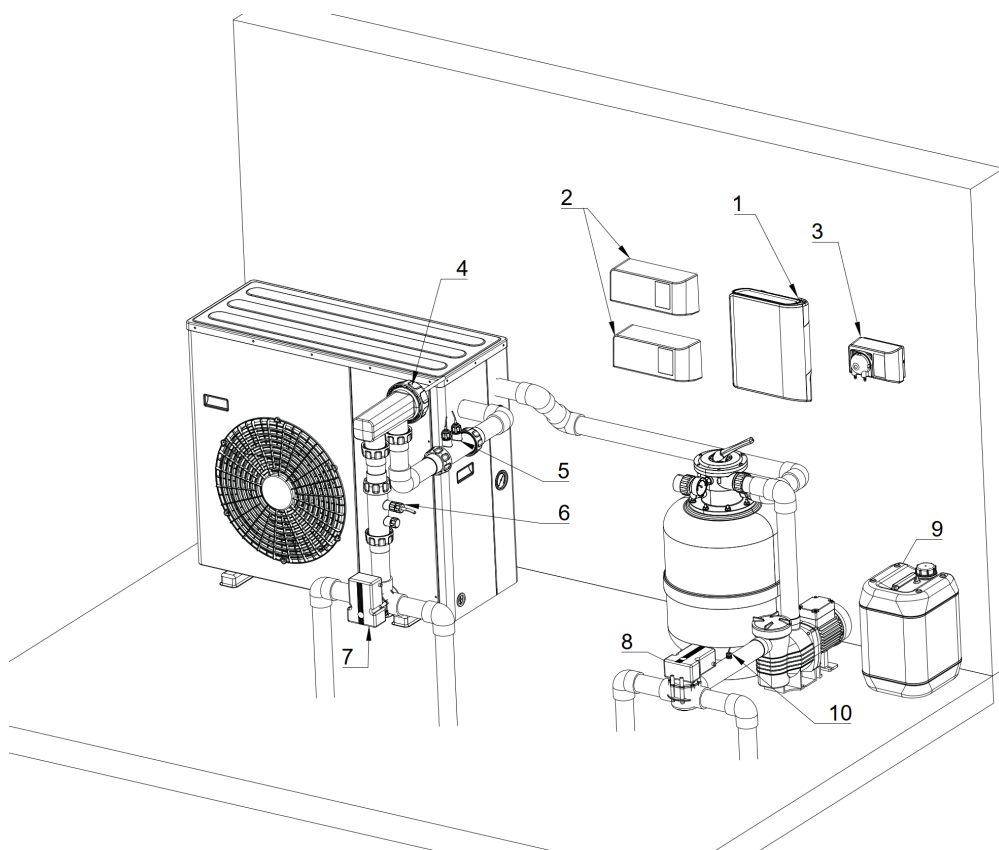
Diamond Hub setup and output configuration are covered in the **Equipment** section.



Diamond Hub Automation accessory

Installation Guide

The BWT DIAMOND MINERALISER must be installed by a qualified pool equipment technician or licensed professional. Correct installation is required for safe operation, reliable performance, and warranty compliance.



1	DIAMOND MINERALISER
2	DIAMOND HUB
3	DIAMOND DOSE
4	Electrolyser Cell
5	Acid Injection Manifold
6	pH + ORP Sensor Manifold
7	Pool+Spa Return Valve Actuator
8	Pool+Spa Suction Valve Actuator
9	Acid Drum
10	Suction Temperature Sensor

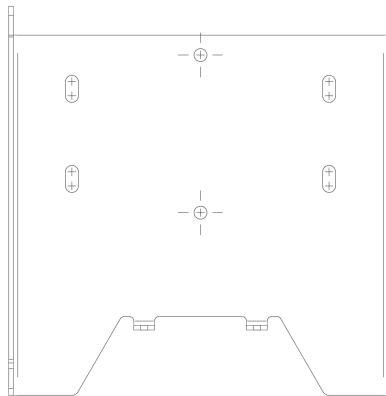
Positioning the Control Unit

Select a suitable location in the pool equipment area.

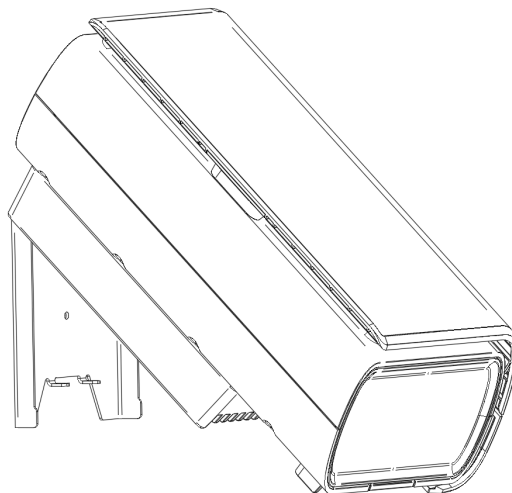
- Mount the control unit on a solid vertical surface, such as a wall or post.
- Ensure the mounting surface can support at least **15 kg** of distributed weight.
- Allow enough clearance for ventilation, cable access, plumbing access, and future servicing.
- Where possible, position the unit away from direct sunlight, heavy rain, water spray, chemical storage areas, and chemical fumes.

Mounting the Control Unit

Mounting Bracket orientation:

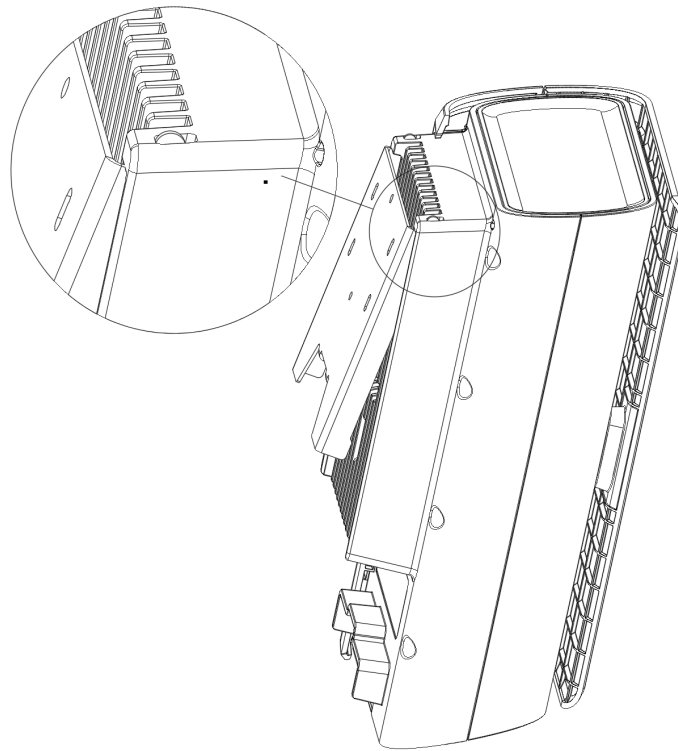


1. Mark the bracket fixing points on the mounting surface.
2. Secure the stainless-steel mounting bracket using suitable fixings.



3. Hold the control unit at approximately **45°** and hook it onto the two upper bracket lugs.
4. Slowly lower the control unit until it sits vertically on the bracket.

5. Take care to locate the mounting slots over the top tabs on the mounting bracket



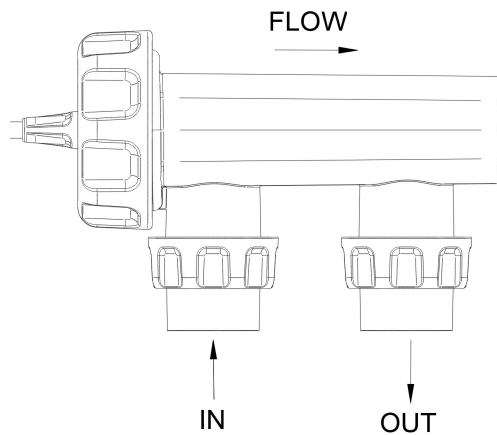
6. Confirm the unit is fully seated and secure before connecting cables.

NOTE: The installer may find it more convenient to connect all the cables before mounting the control unit. In this case, ensure the cables can reach the mounted position.

Plumbing

Correct plumbing is required for reliable flow detection and chlorine production.

- The Mineraliser control unit must be positioned within 1.5 m of the chlorination cell location.
- Water from the filter must enter the cell housing through the connection closest to the Cell Screw Cap.



- This positions the flow sensor correctly so it can detect water flow.
- Use suitable PVC primer and high-pressure solvent cement for PVC pipe joins. Hold joins still for 30 seconds to ensure full bonding strength.

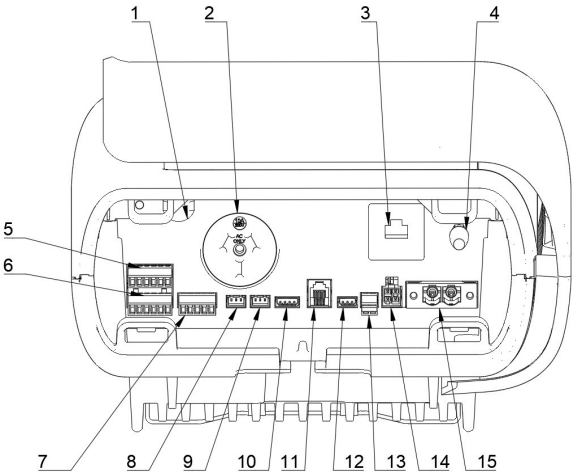
Final Installation Checks

Before operation, confirm that:

- The control unit is securely mounted.
- The power outlet is RCD protected.
- The cell housing is installed in the correct flow direction.
- All unions, O-rings, and pipe fittings are secure.
- The cell power and data cables are correctly connected.
- The pump is connected according to pump type.
- Water flow through the cell housing has been confirmed.
- Salt or mineral levels are within the recommended operating range before chlorination is enabled.

Connections

Connector panel view



1	Mains power input
2	Single Speed Pump outlet
3	LAN Ethernet
4	WIFI Antenna
5	Output Relays
6	Output Relays
7	RS485 Variable Speed Pump
8	Spa Valve Actuator
9	Spa Valve Actuator
10	Diamond Dose
11	Diamond Hub
12	Suction Temp Sensor
13	Optional External Flow switch
14	Chlorinator Cell Data
15	Chlorinator Cell Power

IO Connector

	Relay 2	Relay 3	Relay 4
Connector 5			
Connector 6	-	-	5v out Input R1-Heater

Electrical Connection

The DIAMOND MINERALISER is a plug-in device.

- Connect the unit only to a suitable 240 V AC weather-protected outlet, installed in accordance with local electrical regulations.
- The outlet must be protected by an RCD rated at no more than 30 mA.
- Do not use extension leads, double adaptors, or power boards.
- Switch off power at the outlet before connecting or disconnecting equipment.

Cell Connection

1. Install the electrolysis cell and cell housing in the pool return line.
2. Plug in the cell - Ensure BOTH cell connectors are fully inserted into sockets **14** and **15**
3. Connect the cell data cable to the **Chlorinator Cell Data** connection.
4. Ensure all connectors are firmly fitted and free of moisture.

Pump Connection

Single-Speed Pump

Plug the pump into the Single Speed Pump Outlet, Connector **2**.

This allows the Mineraliser to run the pump according to the programmed filtration timers.

Maximum pump outlet current is 8.5A (2HP pump)

Variable-Speed Pump

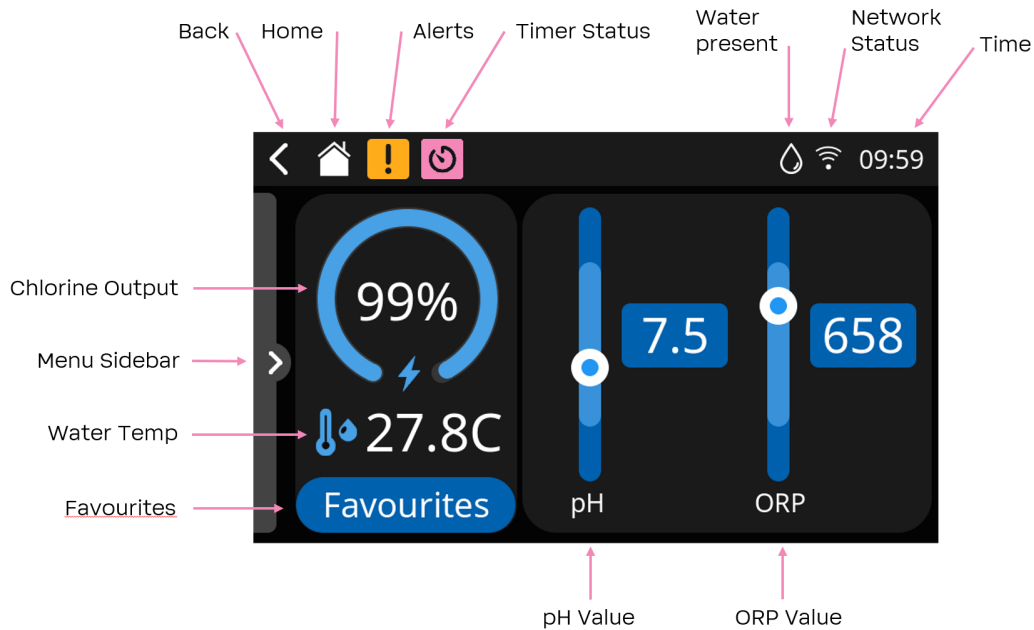
For a supported variable-speed pump:

- Connect the pump to its own suitable mains power outlet.
- Connect the pump control/data cable to the Mineraliser as shown in the variable-speed pump wiring section.
- Configure the pump model and speed settings in the **Pump Setup** menu.

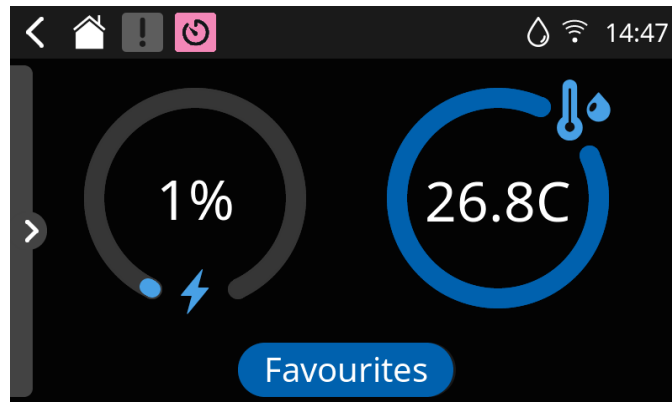
Navigating the Touchscreen

The DIAMOND MINERALISER is controlled using the touchscreen display. The home screen shows the current operating status of the system and provides access to menus, settings, modes and favourites.

Home Screen Overview



Home Screen version without pH/ORP readings:



The home screen provides a quick summary of the current system status.

The main items shown on the home screen are:

- **Chlorine Output** — shows the current chlorination output percentage.
- **Water Temperature** — shows the measured pool water temperature, when a temperature sensor is connected.
- **pH Value** — shows the current pH reading, when pH control is installed.
- **ORP Value** — shows the current ORP reading, when ORP control is installed.
- **Favourites** — opens saved equipment presets.
- **Menu Sidebar** — opens the side menu for Settings and Mode controls.
- **Status Icons** — show system alerts, timer status, water flow, network status and time.

Not all values may be displayed on every system. Some readings, such as pH, ORP and water

temperature, require optional sensors or accessories.

Status Icons

The top bar of the screen shows important system information.

Common status icons include:

- **Back Arrow** — returns to the previous screen.
- **Home Icon** — returns to the home screen.
- **Alerts Icon** — indicates system alerts or warnings.
- **Timer Status Icon** — shows whether a timer or scheduled operation is active.
- **Water Present Icon** — shows whether the Mineraliser is detecting water in the cell housing. When the pump is running and the cell housing is full of water, the Water Present icon should indicate water is present.
The Mineraliser uses water detection to protect the system. Chlorination and acid dosing only operate when the required equipment is running and water is detected.
If the pump is running but water is not detected, check the pump operation, valve position, pool water level, pump prime, cell housing direction and flow through the cell housing.
- **Network Status Icon** — shows Wi-Fi/network connection status.
- **Time** — shows the current system time.

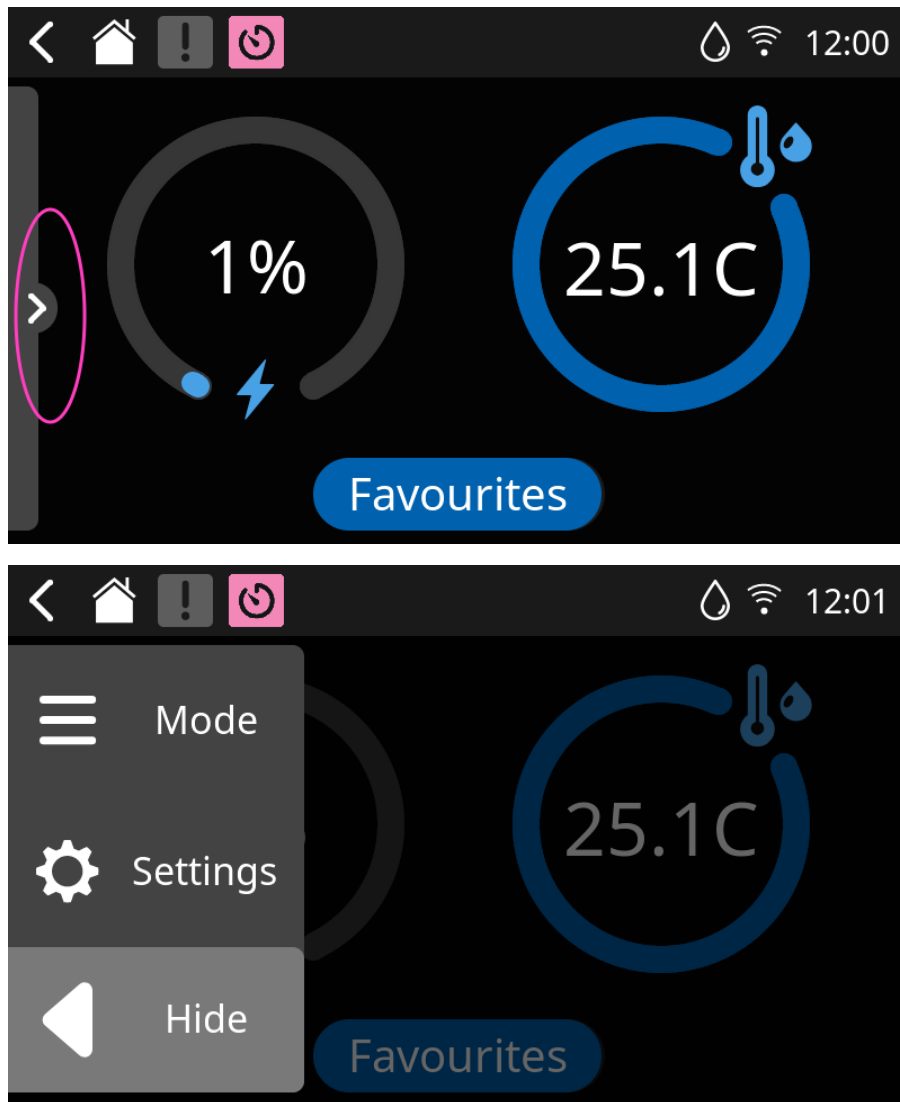
If an alert icon is displayed, check the system message or troubleshooting section before continuing operation.

Opening the Side Menu

To open the side menu:

1. From the home screen, press the small arrow tab on the left side of the screen.
2. The side menu will open.
3. Select the required menu option.

The side menu is used to access key operating menus, including **Settings** and **Mode**.



Settings Menu

Use the **Settings** menu to adjust system configuration and everyday settings.

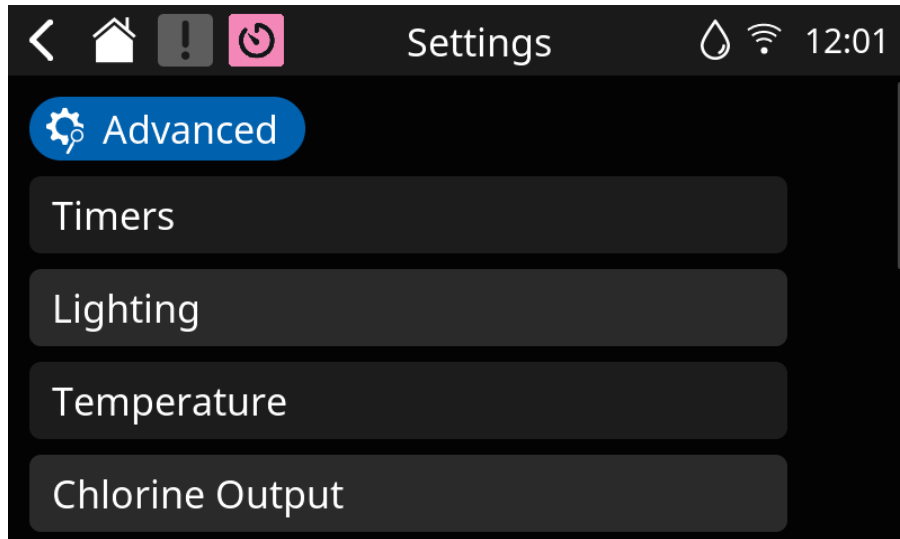
The Settings menu may include:

- Timers
- Chlorine Output
- Temperature
- Screen Brightness
- Date & Time
- Wi-Fi
- Device Pairing
- Advanced Settings

To access the Settings menu:

1. Press the small arrow tab on the left side of the home screen.
2. Select **Settings**.

3. Select the setting you want to change.



Mode Menu

Use the **Mode** menu to access operating modes and manual override functions.

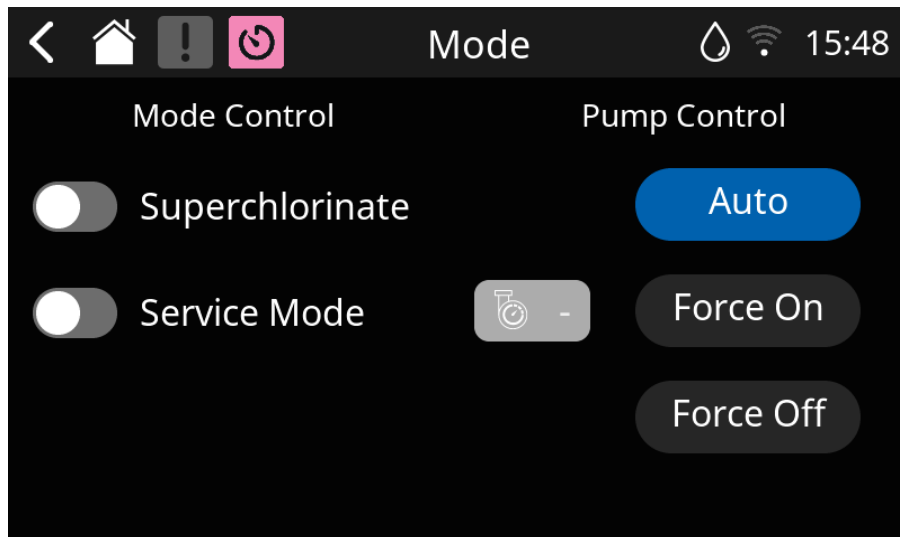
The Mode menu may include:

- Superchlorinate
- Service Mode
- Manual pump control

To access the Mode menu:

1. Press the small arrow tab on the left side of the home screen.
2. Select **Mode**.
3. Select the required mode.

When a mode or override is active, the system may operate outside its normal timer schedule.



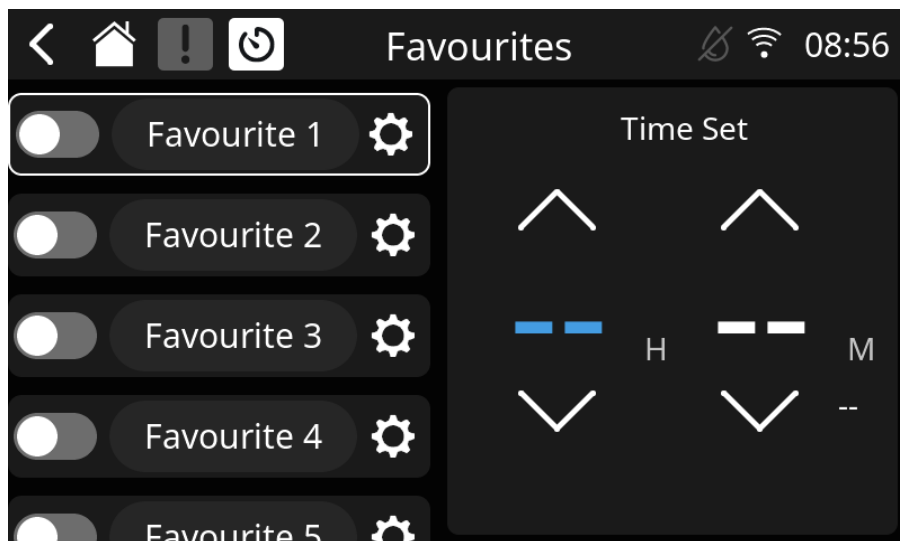
Favourites Button

The **Favourites** button is located on the home screen.

Favourites allow commonly used equipment combinations to be started quickly. For example, a favourite may be used to activate pool lighting, spa equipment, water features, heating or filtration for a set period.

To open Favourites:

1. From the home screen, select **Favourites**.
2. Select the favourite you want to activate or configure.



Back Arrow

The **Back Arrow** returns to the previous screen.

Use the Back Arrow when you want to move back one step without returning all the way to the home screen.

Home Button

The **Home** button returns directly to the home screen.

Use the Home button when you have finished changing settings or want to return to the main system display.

Save and Confirm Buttons

Some screens require changes to be saved before they take effect.

- Select **Save** to store a setting.
- Select **Confirm** to accept a selection or complete a setup step.
- Select **Cancel** to exit without saving changes, where available.

If you leave some screens without selecting Save or Confirm, the change may not be applied.

Toggles: Off and On Behaviour

Many settings use toggle switches.

- A toggle is **off** when it is grey and positioned to the left.
- A toggle is **on** when it moves to the right and changes colour.
- Turning a toggle on activates that feature, timer, mode or equipment output.
- Turning a toggle off disables that feature, timer, mode or equipment output.

After changing a toggle, check whether the screen requires selecting **Save** or **Confirm** before leaving the menu.

Initial Setup / First Start

This section provides a first-start sequence after the DIAMOND MINERALISER has been installed. For detailed instructions on each function, refer to the relevant section later in this manual.

Before starting, ensure the system has been installed by a qualified pool equipment technician or licensed professional.

Balance Pool Water / Recommended Pool Chemistry

The Foundations of Balanced Water

Correct water balance is essential for effective chlorination, swimmer comfort, and equipment life. Test the pool water regularly and adjust chemical levels as required.

The key water chemistry levels are:

- **Free chlorine** — sanitises the pool water.
- **pH** — affects chlorine effectiveness, swimmer comfort, and equipment protection.
- **Total alkalinity** — helps stabilise pH.
- **Calcium Hardness** — affects water balance and the risk of scaling or corrosion.
- **Cyanuric acid / stabiliser** — helps protect chlorine from UV degradation.
- **Salt or mineral level** — allows the electrolysis cell to produce chlorine correctly.

Regular manual water testing is still required, even when optional pH or ORP automation is installed.

Chlorine and ORP

Chlorine and ORP are related, but they are not the same measurement.

Chlorine Level

Free chlorine is measured in **parts per million (ppm)**. It indicates the amount of available chlorine in the pool water.

Recommended range: 2.0–3.0 ppm

A manual chlorine test should be performed regularly to confirm that the pool has an appropriate sanitiser level.

ORP

ORP stands for **oxidation-reduction potential** and is measured in **millivolts (mV)**. ORP indicates the water's oxidising potential, which is affected by chlorine level, pH, stabiliser level, water temperature, and organic load.

Important: ORP monitoring and automatic ORP control require the optional **Diamond Dose** system and a compatible ORP probe.

When ORP control is installed and enabled, the Mineraliser can start or stop chlorine production based on the selected ORP setpoint.

Key Factors Affecting Chlorine and ORP

To ensure your Chlorine and ORP readings are accurate and effective, you must keep the following in balance:

Factor	Recommended Range	Effect
pH Level	7.0 – 7.6	High pH reduces chlorine effectiveness and may lower ORP readings.
Cyanuric Acid / Stabiliser	30 – 50 ppm	Reduces chlorine from UV loss. Excess reduces chlorine activity and lowers ORP.
Salt/Mineral Level	Refer to salt level table	Low salt or mineral levels can reduce chlorine production.
Cell Condition	Clean and free of scale	Scale can reduce chlorine output and affect salinity readings. Heavy scale damages the cell

User Checks

- Use manual chlorine testing to confirm free chlorine levels.
- Keep pH within the recommended range before relying on ORP readings.
- Check probe readings regularly against pool water testing. Calibrate the pH probe when required.
- Do not rely on ORP alone as a replacement for manual water testing.

pH Level

pH affects chlorine performance, swimmer comfort, pool surfaces, and equipment life.

pH Recommendations by Pool Type table:

Pool Type	Recommended pH Range	Why it Matters
Fibreglass	7.0 – 7.2	Lower pH may reduce visible calcium scaling on smooth surfaces.
Concrete / Plaster	7.4 – 7.6	A slightly higher pH can help protect plaster surfaces.
Vinyl Liner	7.4 – 7.6	Helps maintain swimmer comfort and protect liner condition.

Why pH Matters

- **Low pH** can make water acidic, causing eye irritation, corrosion of metal components, and potential damage to pool surfaces.
- **High pH** can reduce chlorine effectiveness and contribute to cloudy water, scaling, and calcium deposits on pool surfaces and the electrolysis cell.

Maintenance Notes

- Check and adjust **total alkalinity** before making large pH corrections.
- Salt and mineral chlorination systems commonly cause pH to rise over time.
- Acid may be required periodically to reduce pH. Always follow chemical manufacturer instructions.

Total Alkalinity

Total alkalinity helps stabilise pH and reduces rapid pH movement.

Recommended Total Alkalinity

Pool Surface	Target Total Alkalinity
Fibreglass	80–100 ppm
Vinyl Liner	80–120 ppm
Concrete / Plaster	100–120 ppm

For many salt and mineral pools, keeping total alkalinity toward the lower end of the recommended range can help reduce upward pH drift.

Adjusting Total Alkalinity

- If total alkalinity is too high, it can make pH difficult to adjust.
- If total alkalinity is too low, pH may fluctuate more easily.
- Adjust total alkalinity before final pH adjustment.

Always follow chemical manufacturer instructions when adding acid, buffer, or other balancing chemicals.

Calcium Hardness

Calcium hardness affects water balance, pool surfaces and scale formation.

Recommended range: 80–500 ppm, or within any narrower range specified by the pool-surface manufacturer.

High calcium hardness, particularly when combined with high pH and alkalinity, may cause scale on pool surfaces and the electrolyser cell. Low calcium hardness may contribute to corrosive water conditions.

Cyanuric Acid / Stabiliser

Cyanuric acid, also known as stabiliser, helps protect chlorine from breakdown caused by sunlight.

Recommended Cyanuric Acid Levels

Environment	Recommended Range
Standard outdoor salt or mineral pool	30–50 ppm
High sun exposure	60–80 ppm
Indoor or heavily shaded pool	0–30 ppm

Important Notes

- Low stabiliser may allow chlorine to be lost quickly in direct sunlight.
- Higher stabiliser reduces chlorine activity and slow ORP response.
- If stabiliser is too high, partial draining and refilling may be required to reduce the level.
- Add stabiliser gradually and allow sufficient time for it to dissolve and register on a test kit.

Salt Level

The DIAMOND MINERALISER requires the correct salt or mineral concentration for chlorine production.

Recommended Salt or Mineral Levels

Salt Type	Recommended Range	Target Level
Sodium chloride	3500–7000 ppm	4000 ppm
Mineral / magnesium blend	3500–4000 ppm	3500 ppm

Why Salt Level Matters

- If the level is too low, chlorine production may be reduced and the system may display a **Salinity Level Low** warning.
- If the level is too high, the water may taste salty and may contribute to corrosion of susceptible metal components.
- A scaled or dirty cell can cause inaccurate salinity readings.

Salt Dosing Guide

For a new fill, use the following guide to reach approximately **4000 ppm**:

Pool volume in litres × 0.004 = kilograms of salt required

Examples:

Pool Volume	Salt Required
40,000 L	160 kg
50,000 L	200 kg
60,000 L	240 kg

Maintenance Notes

- Test salt level after heavy rain, water loss, or major top-ups.
- Always confirm salinity with a manual salt test before adding salt.
- Inspect and clean the electrolysis cell if salinity readings appear incorrect or **any calcium build-up is visible**.

Langelier Saturation Index

Maintain the pool water at a Langelier Saturation Index (LSI) between **-0.30 and +0.30**, with **0.00 as the target**.

LSI must be calculated using the measured pH, water temperature, calcium hardness, total alkalinity corrected for cyanuric acid, and total dissolved solids including salinity, using the calculation method specified in these instructions.

Maintaining the LSI within this range does not replace the requirement to maintain pH, salinity, total alkalinity, calcium hardness and stabiliser within their individual published limits.

Confirm Plumbing Direction

Before applying power, confirm that the cell housing is installed in the correct flow direction.

Water from the filter must enter the cell housing through the connection closest to the cell screw cap. This allows the cell's internal water sensor to detect flow correctly.

Also confirm that:

- The cell housing is full of water when the pump is running.
- The barrel unions are hand-tight.
- There are no visible leaks.
- The cell is correctly seated in the housing.

Connect Cell, Pump and Power

Before turning the system on:

1. Confirm the control unit is securely mounted.
2. Confirm the electrolysis cell is installed in the pool return line.
3. Connect both cell connectors to the correct sockets.
4. Connect the cell data cable.
5. For a single-speed pump, plug the pump into the single-speed pump outlet.
6. For a supported variable-speed pump, connect the pump according to the pump setup and wiring instructions.
7. Connect the Mineraliser to a suitable weather-protected 240 V AC power outlet.

The power outlet must be RCD protected and installed in accordance with local electrical regulations.

Power On

Turn power on at the outlet.

After a short startup period, the LCD screen will illuminate and the Mineraliser will begin its startup sequence.

Once the home screen appears, check that:

- The screen is operating.
- No critical alerts are displayed.

- The time is shown in the top-right corner.

The system clock is set in the next step.

Set Date and Time

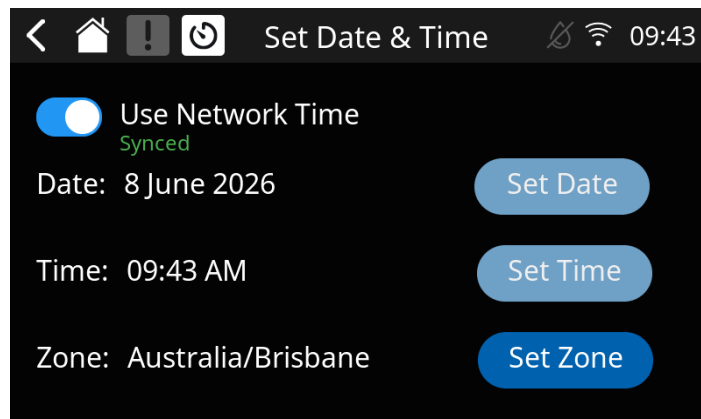
The system clock must be correct for timers and scheduled operation to work properly. If the date, time or time zone is incorrect, filtration and chlorination timers may run at the wrong time.

Use Network Time where possible, especially if the Mineraliser is connected to Wi-Fi or Ethernet.

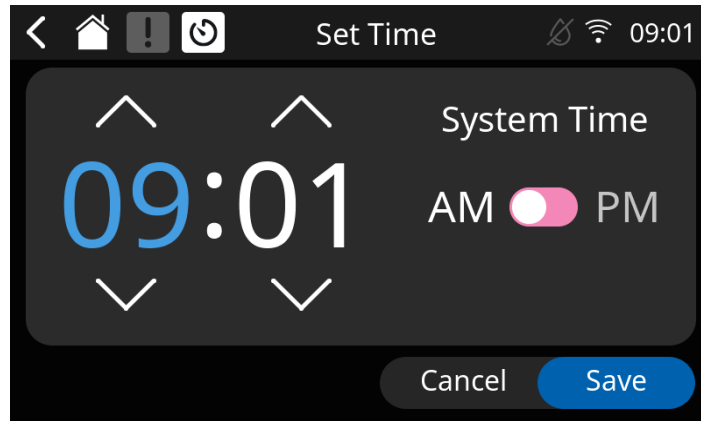
Setting Date and Time

Ensuring your system clock is accurate is important for timer schedules.

1. **Open Date & Time:** Navigate to **Settings** and select **Date & Time**.



2. **Automatic Setup (Recommended):** Enable **Use Network Time**, select **Set Zone**, and choose your local region.
3. **Manual Setup:**
 - Disable **Network Time** by selecting the toggle.
 - **Set Date:** Select the date via the calendar and Select **Save**.
 - **Set Time:** Adjust the hours and minutes using the **up/down arrows** and the **AM/PM toggle**, then select **Save**.



Exit: Select the **Home button** in the top left corner to return to the main information screen.

Connect to Network

Connecting the Mineraliser to a network allows the system to receive available software updates and enables supported remote access features.

The Mineraliser can be connected by either:

- **Wi-Fi**
- **Ethernet cable**, using the LAN Ethernet port

Wi-Fi Connection

To connect using Wi-Fi:

1. Open the side menu using the small arrow tab on the left side of the screen.
2. Select **Settings**.
3. Select **Wi-Fi**.
4. Select **Scan For Networks**.
5. Select your Wi-Fi network.
6. Enter the Wi-Fi password using the on-screen keyboard.
7. Select **Save**.
8. Confirm the connected network name and signal strength are displayed.

If the signal is weak, improve Wi-Fi coverage near the pool equipment area before relying on remote access or automatic updates.

Ethernet Connection

To connect using Ethernet:

1. Connect an Ethernet cable from the router or network switch to the **LAN Ethernet** port on the Mineraliser.
2. Ensure the network router is powered on and has internet access.
3. Check the network status icon on the top bar of the home screen.
4. Confirm the system shows network connection before pairing the mobile app or relying on software updates.

Use Ethernet where available for the most stable connection.

After connecting to Wi-Fi or Ethernet, continue to **System Update** to confirm internet access and update status.

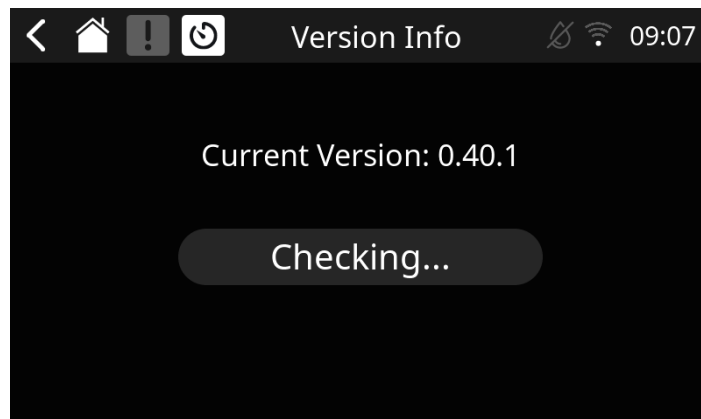
System Update

After connecting the Mineraliser to Wi-Fi or Ethernet, check that the system can access the internet and confirm the software update status.

The System Updates screen shows the current software version and checks whether an update is available.

To check the system update status:

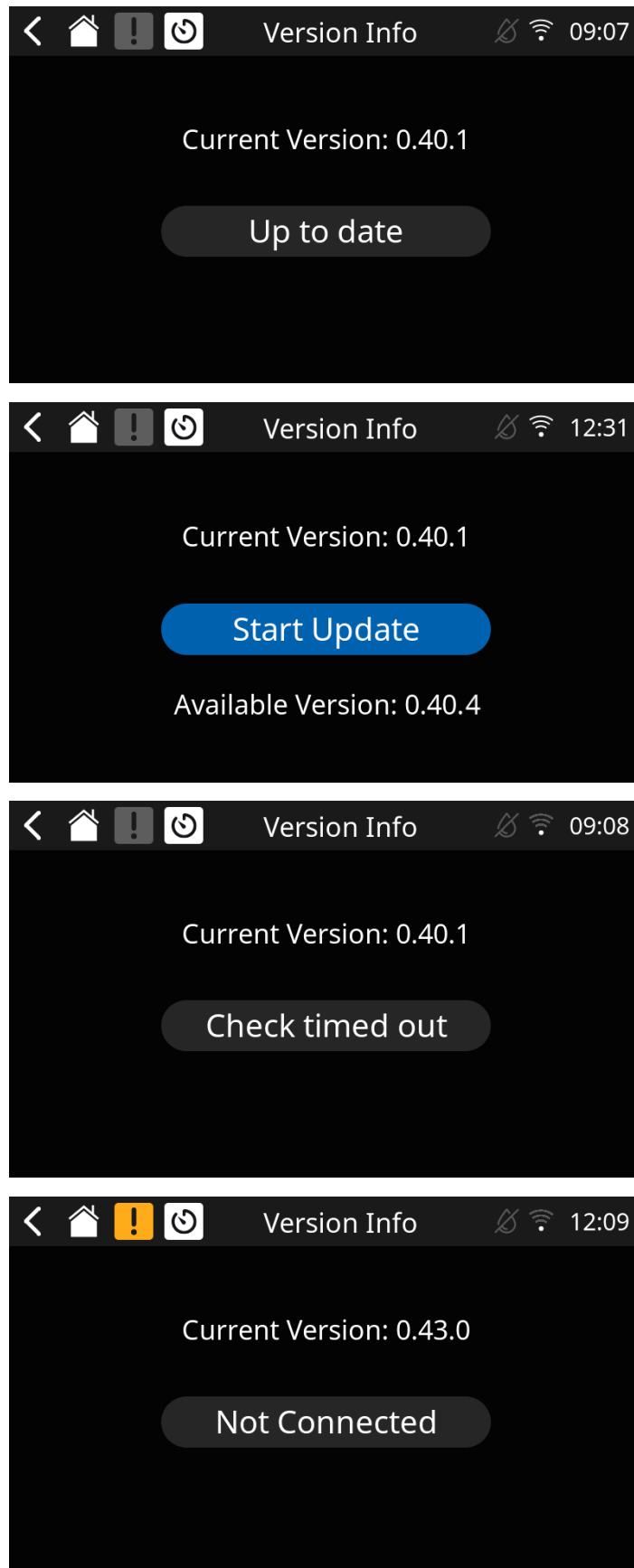
1. Open the side menu using the small arrow tab on the left side of the screen.
2. Select **Settings**.
3. Select **System Updates**.
4. Wait while the system checks for available updates.



The check may take a few minutes to complete.

After checking, the system will show one of the following results:

- **Up to date** — the Mineraliser has successfully contacted the update server and no update is currently available.
- **Start Update** — the Mineraliser has successfully contacted the update server and an update is available.
- **Check timed out** — the Mineraliser could not contact the update server. Check the Wi-Fi or Ethernet connection and confirm the network has internet access.
- **Not Connected** — the Mineraliser does not have any active connection to Wi-Fi or Ethernet



After connecting to a network, it may take a few minutes before internet access is available.
Do not turn off power while an update is in progress.

Set First Automation Timer

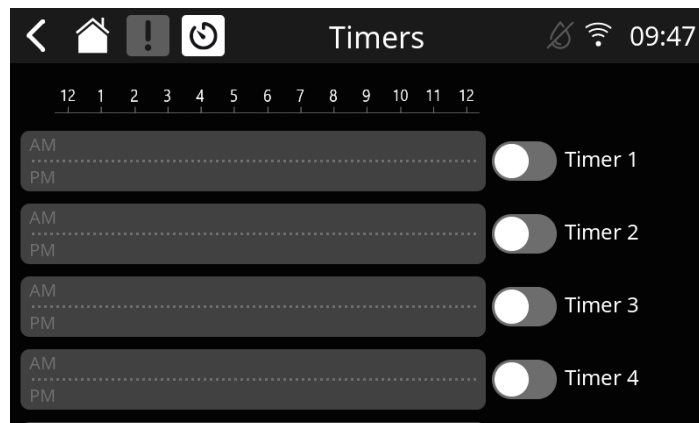
Timers control when the pump, chlorination and other selected equipment operate automatically.

For normal pool operation, at least one timer should be created with both **Filter Pump** and **Sanitise** allocated. This allows the Mineraliser to run the pump and produce chlorine during the programmed filtration period.

The timer will only operate if:

- a time period has been set
- the required equipment has been allocated
- the timer toggle is switched on
- the system clock is correct

If the timer does not run at the expected time, check **Settings > Date & Time** first.



Open the Timers Screen

To open the Timers screen:

1. Open the side menu using the small arrow tab on the left side of the screen.
2. Select **Settings**.
3. Select **Timers**.

The Timers screen shows the available timers. Each timer has:

- a timeline showing the programmed run period
- a timer name
- an on/off toggle
- a visual indication of active time periods

A timer is off when the toggle is grey and positioned to the left. A timer is on when the toggle moves to the right and changes colour.

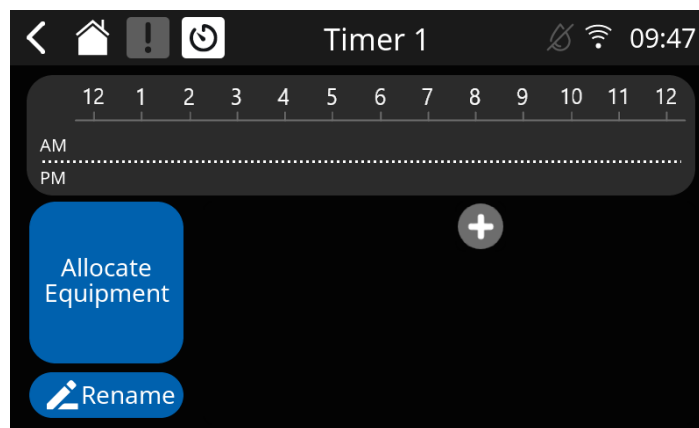
Select Timer 1

To configure the first timer:

1. On the Timers screen, select the grey bar for **Timer 1**.
2. The Timer 1 setup screen will open.

The timer setup screen allows you to:

- add a time period
- set the start time
- set the end time
- allocate equipment
- rename the timer

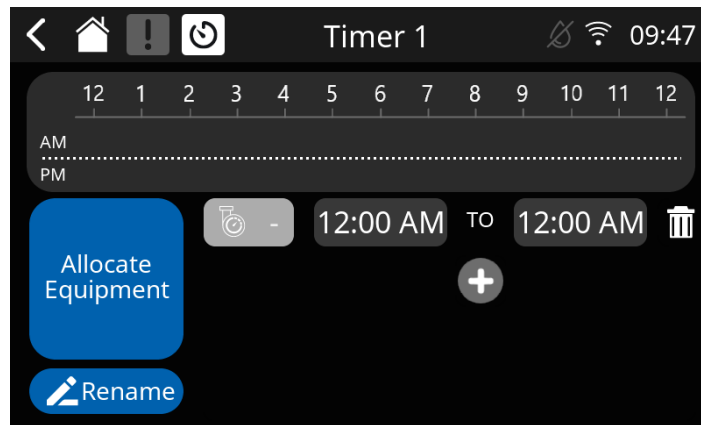


Add a Time Period

To add a timer period:

1. Select the + button.
2. A new time slot will appear.
3. Select the start time to adjust when the timer begins.
4. Select the end time to adjust when the timer finishes.

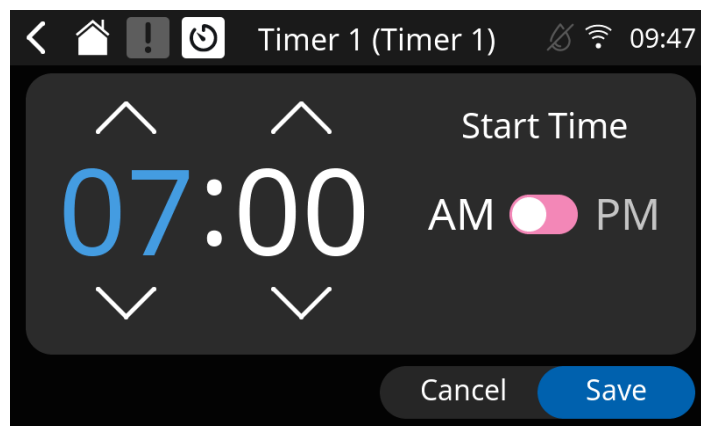
The timer bar at the top of the screen provides a visual indication of the programmed run period.



Set the Start Time

To set the timer start time:

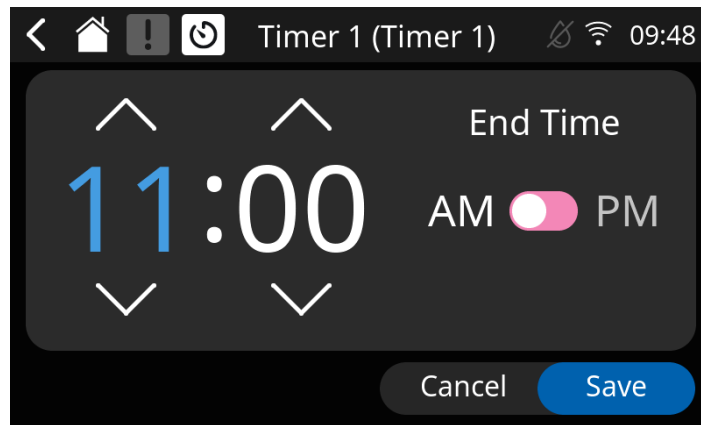
1. Select the start time (left most time)
2. Use the up and down arrows to adjust the hour and minute.
3. Select **AM** or **PM**, where applicable.
4. Select **Save**.



Set the End Time

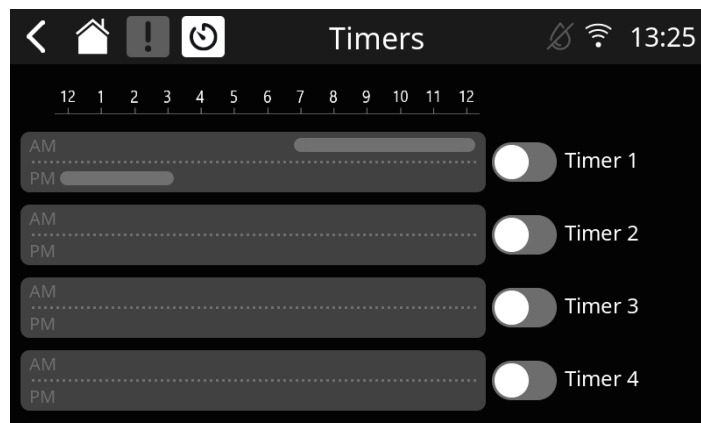
To set the timer end time:

1. Select the end time.
2. Use the up and down arrows to adjust the hour and minute.
3. Select **AM** or **PM**, where applicable.
4. Select **Save**.



Ensure the start and end times provide enough daily filtration time for the pool.

A typical starting point may be **6–8 hours per day**, depending on pool size, season, bather load, pump type and advice from your pool professional.



Allocate Equipment

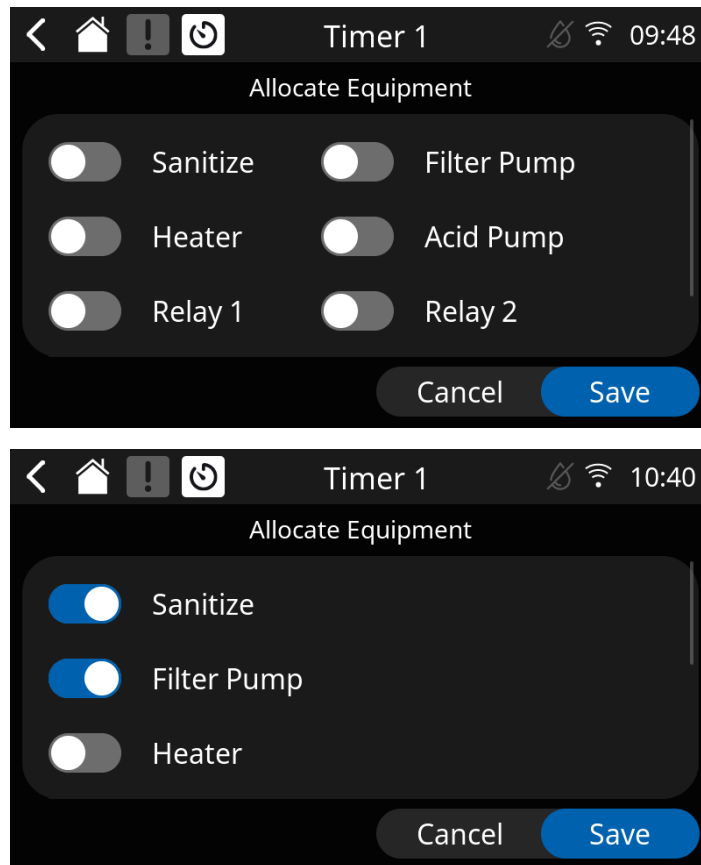
After setting the timer period, select which equipment should run during that timer.

To allocate equipment:

1. From the Timer 1 screen, select **Allocate Equipment**.
2. Turn on **Filter Pump**.
3. Turn on **Sanitise**.
4. Add any other equipment required for that timer, such as heating, lighting, acid dosing or water features.
5. Select **Save**.

For standard pool filtration and chlorination, **Filter Pump** and **Sanitise** must both be selected.

If **Sanitise** is selected without the pump running, chlorination will not operate correctly. Chlorination requires water flow through the cell.



Rename the Timer

Renaming the timer can make it easier to identify its purpose.

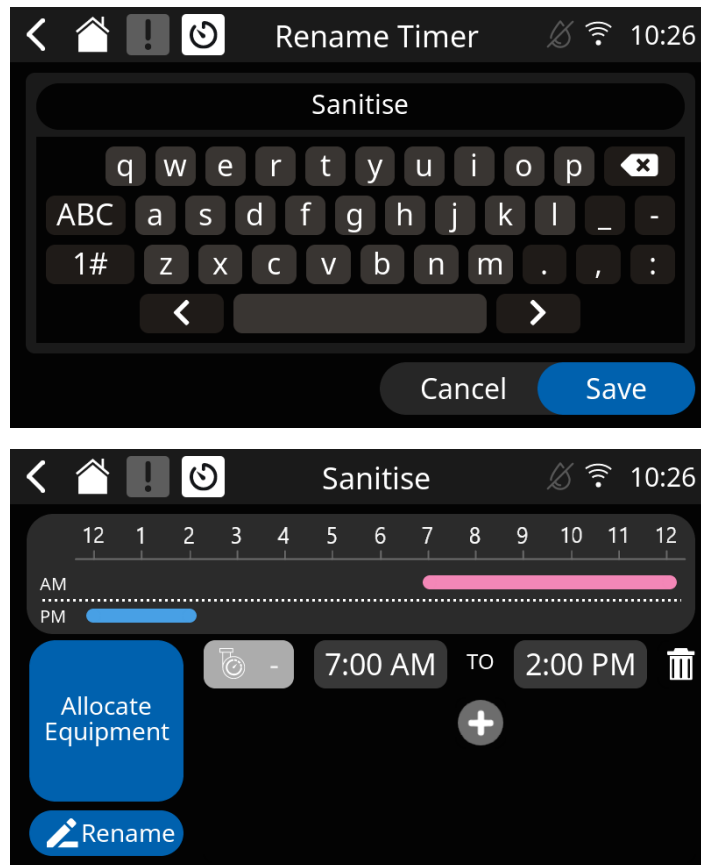
Examples:

- **Sanitise**
- **Filtration**
- **Morning Run**
- **Evening Run**
- **Heating**

To rename a timer:

1. From the Timer 1 screen, select **Rename**.
2. Enter the new timer name using the on-screen keyboard.
3. Select **Save**.

The new timer name will appear on the main Timers screen.



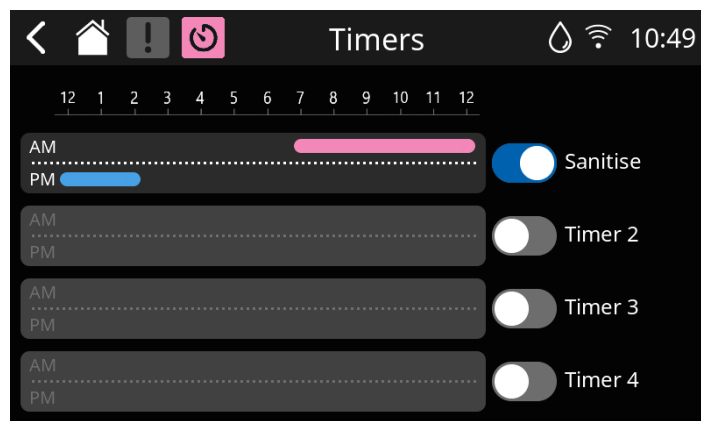
Activate the Timer

After the time period and equipment allocation have been set, the timer must be switched on.

To activate the timer:

1. Return to the main Timers screen.
2. Locate the toggle beside the timer name.
3. Turn the toggle on.
4. Confirm the toggle moves to the right and changes colour.

When the timer is active, the Mineraliser will automatically run the selected equipment during the programmed time period.



Confirm Timer Operation

After activating the timer, confirm the system operates correctly.

Check that:

- The timer appears on the Timers screen
- The timer toggle is on
- The timer bar shows the programmed run period
- The timer icon turns pink during the programmed timer period.
- The pump turns on during the timer period
- The water flow icon indicates water is present
- Chlorination starts when **Sanitise** is allocated and water flow is detected
- No critical alerts are displayed

The timer icon in the top bar is **white** when no timer is currently running. This includes when timers are switched off, or when a timer is enabled but the current time is outside its programmed time slot. The timer icon turns **pink** only when the current time is inside an active timer period.

Common Timer Setup Issues

If the timer does not operate as expected, check the following:

- **Date & Time** is correct.
- The correct time zone is selected.
- The timer has a valid start and end time.
- The timer toggle is switched on.
- **Filter Pump** is allocated to the timer.
- **Sanitise** is allocated if chlorination is required.
- The pump is connected or configured correctly.
- Water flow is detected through the cell housing.
- The system is not in a manual mode or override that prevents normal automatic operation.
- Spa Mode is not preventing equipment marked Clean from operating.

For first setup, confirm the pump and chlorination operate correctly before leaving the system in automatic operation.

Pair Mobile App

To enable supported remote access features, pair the Mineraliser with the mobile app.

To pair the app:

1. Download the Mineraliser app from your app store.
2. On the Mineraliser, open the side menu.

3. Select **Settings**.
4. Select **Device Pairing**.
5. A unique QR code will appear on the Mineraliser screen.



6. Open the app and follow the prompts to scan the QR code.
7. Confirm pairing is complete.

Remote access features may depend on Wi-Fi connection, app availability and system configuration.

The Mineraliser can be paired multiple times. This may be useful if your pool professional needs to monitor your pool remotely.

First-Start Checklist

Before leaving the system in automatic operation, confirm the following:

- Pool water has been tested and balanced.
- Salt or mineral level is within the recommended range.
- pH is within the recommended range.
- Cell housing is installed in the correct flow direction.
- Cell connectors and data cable are securely connected.
- Pump is correctly connected or configured.
- System powers on correctly.
- Date and time are correct.
- System Update shows "Up to Date"
- Wi-Fi or Ethernet network connection is active, where required.
- Timer 1 has been created.
- Filter Pump and Sanitise are allocated to the timer.
- Timer is switched on.
- Water flow is detected when the pump runs.
- Chlorination starts only when water flow is present.
- No leaks are visible.
- No critical alerts are displayed.
- Mobile app is paired, where required.

Common Controls

This section covers the user controls most commonly adjusted after the initial setup has been completed.

Use this section to adjust chlorination output, manage timers, change temperature settings, adjust lighting, change display brightness, check system information, check software update status, and use manual mode controls.

Advanced installation settings, pump setup, equipment configuration, acid dosing setup and ORP setup are covered later in this manual.

Chlorine Output

Chlorination Output controls the rate of chlorine production while the Mineraliser is running.

To adjust chlorination output:

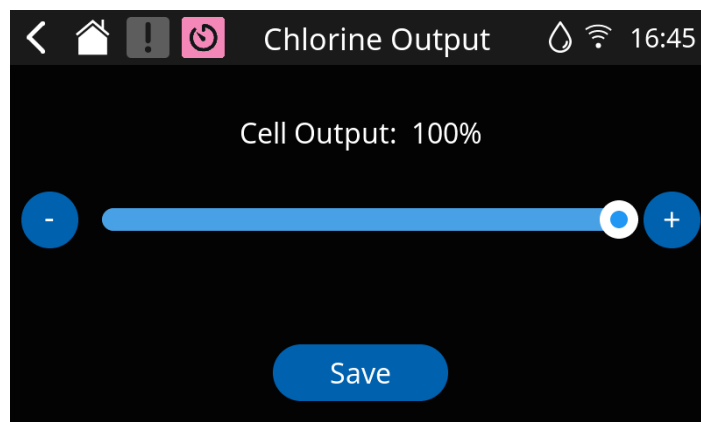
1. Open the side menu.
2. Select **Settings**.
3. Select **Chlorine Output**.
4. Adjust the output percentage.
5. Select **Save**.

Increase the output if manual water testing shows free chlorine is too low. Reduce the output if free chlorine is consistently too high.

Chlorine is only produced when:

- the pump is running
- water flow is detected
- Sanitise is allocated to an active timer or mode, or is being controlled by Spa Mode.
- the system is not in a mode that prevents chlorination

Regular manual water testing is still required. Do not rely only on the output percentage to confirm the pool has enough chlorine.



Managing Timers

Timers control when the pump, chlorination and selected equipment operate automatically.

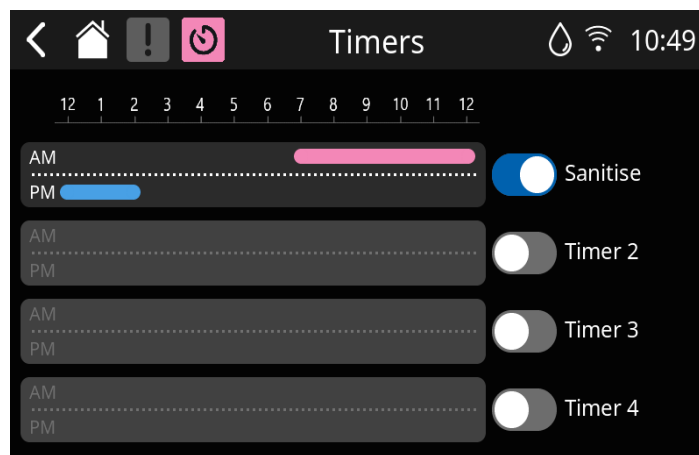
The first timer setup is covered in **Initial Setup / First Start**. This section covers normal timer changes after setup.

To open Timers:

1. Open the side menu.
2. Select **Settings**.
3. Select **Timers**.

Use the Timers screen to:

- turn timers on or off
- edit start and end times
- add additional time periods
- change equipment allocated to a timer
- rename timers



Turning a Timer On or Off

Each timer has a toggle beside the timer name.

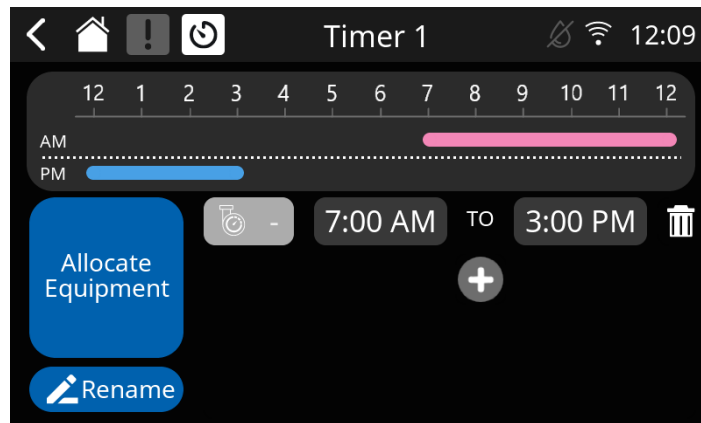
- A timer is off when the toggle is grey and positioned to the left.
- A timer is on when the toggle moves to the right and changes colour.

Turning a timer off disables that timer. It will not run, even if a time period has been set.

Editing a Timer

To edit an existing timer:

1. Open **Settings > Timers**.
2. Select the grey bar for the timer you want to edit.
3. Adjust the start time, end time, equipment allocation or timer name.
4. Select **Save** where required.



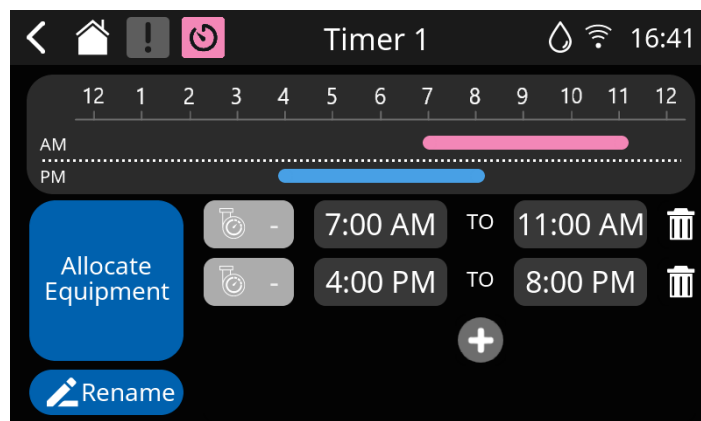
Adding Another Time Period

A timer can contain more than one time period.

To add another time period:

1. Open the timer you want to edit.
2. Select the **+** button.
3. Set the new start time.
4. Set the new end time.
5. Select **Save** where required.

Use multiple time periods if you want the system to run at different times of the day, such as a morning filtration period and an afternoon filtration period.



Deleting a Time Period

To delete a time period:

1. Open the timer you want to edit.
2. Select the delete icon beside the time period.

Deleting a time period removes that run period from the timer.

Changing Allocated Equipment

Allocated equipment determines what runs during the timer period.

To change allocated equipment:

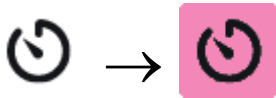
1. Open the timer you want to edit.
2. Select **Allocate Equipment**.
3. Turn the required equipment on or off.
4. Select **Save**.

For normal pool filtration and chlorination, **Filter Pump** and **Sanitise** should both be selected.

Timer Status Icon

The timer icon in the top bar is **white** when no timer is currently running. This includes when timers are switched off, or when a timer is enabled but the current time is outside its programmed time slot.

The timer icon turns **pink** only when the current time is inside an active timer period.



If a Timer Does Not Run

If a timer does not operate as expected, check that:

- **Date & Time** is correct.
- The correct time zone is selected.
- The timer has a valid start and end time.
- The timer toggle is switched on.
- Required equipment is allocated to the timer.
- **Filter Pump** is allocated if the pump should run.
- **Sanitise** is allocated if chlorination is required.
- The pump is connected or configured correctly.
- Water flow is detected through the cell housing.
- The system is not in a manual mode or override that prevents automatic operation.
- Spa Mode is not preventing equipment marked Clean from operating.

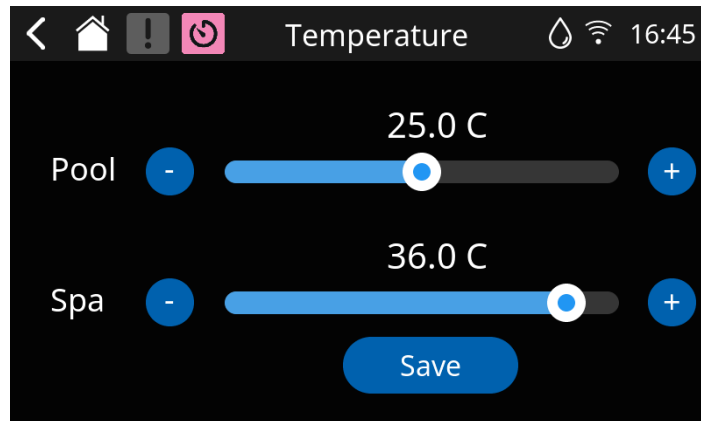
Temperature

The Temperature setting is used to adjust heating setpoints where compatible heating equipment and a temperature sensor are installed.

To adjust temperature:

1. Open the side menu.
2. Select **Settings**.
3. Select **Temperature**.
4. Adjust the required pool or spa temperature.
5. Select **Save**, where required.

For heating to operate, the heater must be installed, configured and allocated to the required timer, mode or favourite.



Lighting

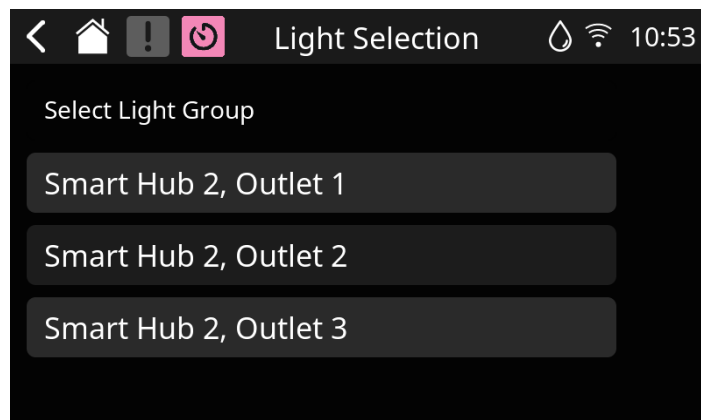
The Lighting menu is used to control compatible pool lighting where lighting equipment has been installed and configured.

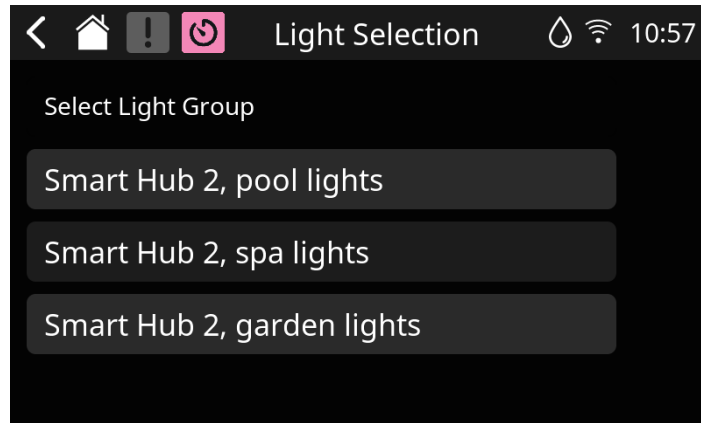
To access lighting:

1. Open the side menu.
2. Select **Settings**.
3. Select **Lighting**.
4. Select the required lighting option.

Available lighting options depend on the installed equipment and system configuration.

Lighting setup and output configuration are covered in **Advanced Settings > Equipment**.





Screen and LED Brightness

Screen and LED brightness can be adjusted to suit the installation location and viewing conditions.

The Mineraliser has two brightness settings:

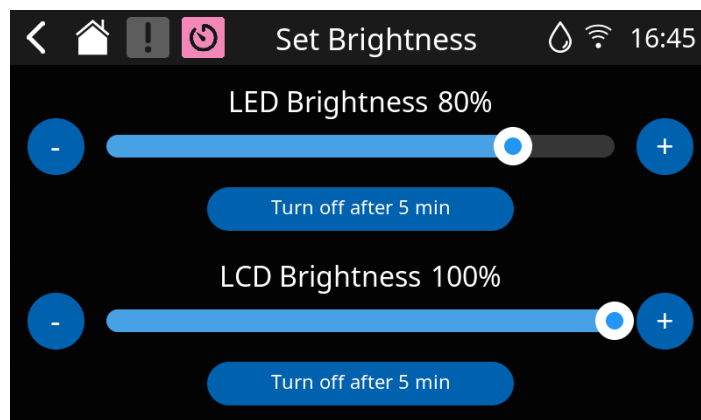
- **LED Brightness** — adjusts the brightness of the indicator LEDs used for system status and other indicators.
- **LCD Brightness** — adjusts the brightness of the touchscreen display.

The indicator LEDs can be very bright, especially in shaded equipment areas or at night. Reduce **LED Brightness** if the indicator lights are brighter than required.

Reducing **LCD Brightness** or using automatic screen-off may help extend display life.

To adjust screen or LED brightness:

1. Open the side menu.
2. Select **Settings**.
3. Select **Set Brightness**.
4. Adjust **LED Brightness** using the slider, minus button or plus button.
5. Adjust the LED automatic turn-off time if required.
6. Adjust **LCD Brightness** using the slider, minus button or plus button.
7. Adjust the LCD automatic turn-off time if required.



System Information

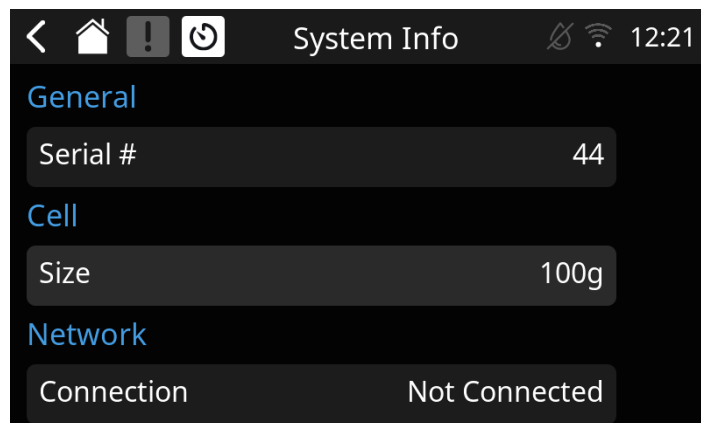
System Information displays system details that may be useful when contacting support.

This may include:

- current software version
- device information
- system identification details

To view System Information:

1. Open the side menu.
2. Select **Settings**.
3. Select **System Information**.



Mode Controls

The Mode screen contains manual operation and override controls.

To open Mode controls:

1. Open the side menu.
2. Select **Mode**.
3. Select the required mode or pump control option.

Mode controls include:

1. **Superchlorinate**
2. **Service Mode**
3. **Pump Control**

When a mode or manual override is active, the system may operate outside its normal timer schedule.

Superchlorinate

Superchlorinate runs chlorination at **100% output for 24 hours**.

Use Superchlorinate to help recover water quality after:

- heavy pool use

- heavy rain
- cloudy water
- low chlorine detected by manual testing

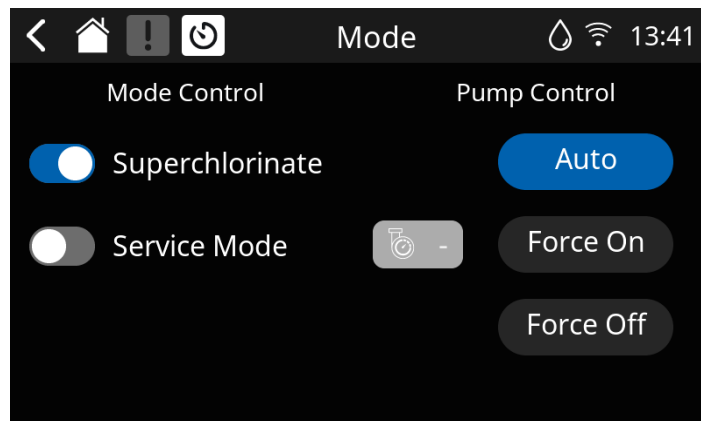
To activate Superchlorinate:

1. Open the side menu.
2. Select **Mode**.
3. Turn on **Superchlorinate**.

When Superchlorinate is active, the Mineraliser will run chlorination at 100% output for 24 hours, provided the pump is running and water flow is detected.

Use Superchlorinate only when required. Extended or unnecessary use may reduce cell life.

After the Superchlorinate period ends, the system returns to normal chlorination control.



Service Mode

Service Mode is intended for maintenance, testing and service work.

When Service Mode is selected, normal timers and automatic functions are suspended. A manual control screen will open, allowing individual outputs to be switched on and off as required.

Service Mode may be used for tasks such as:

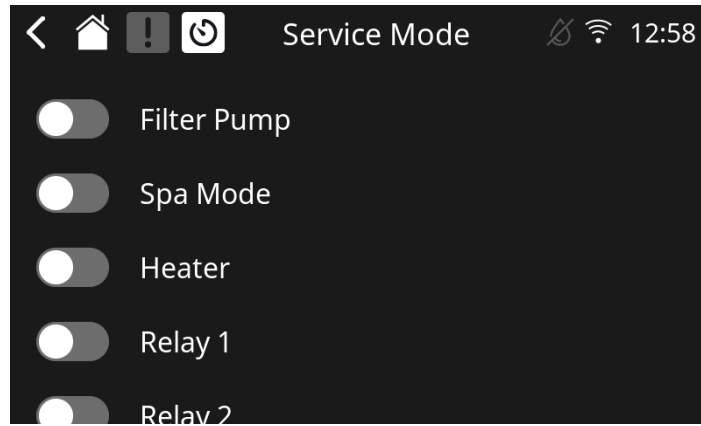
- checking pump operation
- testing equipment outputs
- servicing the pool system
- backwashing
- maintenance by a pool technician

When Service Mode is active:

1. Timers and automatic functions are turned off.
2. Individual outputs can be switched on or off manually.
3. The system remains in manual service operation while the Service Mode screen is open.

When the Service Mode screen is exited, all manually activated outputs are turned off and the system returns to its previous operating state.

Service Mode should normally be used by a pool technician or experienced user.



Pump Control

Pump Control allows the pump to be manually controlled or returned to automatic timer operation.

The available pump controls are:

- **Auto** — the pump follows programmed timers and normal automatic operation.
- **Force On** — turns the pump on manually.
- **Force Off** — turns the pump off manually.

Use **Auto** for normal operation.

Use **Force On** when the pump needs to run outside its programmed timer, such as during testing, filter cleaning or checking water flow.

Use **Force Off** only when the pump needs to be stopped manually. Return the pump to **Auto** when finished so the system can resume normal scheduled operation.

Advanced Settings

Advanced Settings are intended for installer setup, equipment configuration and system maintenance.

These settings should only be changed by a qualified pool equipment technician, installer or experienced user. Incorrect changes may prevent the system from operating correctly.

Advanced menu items may include:

- Pump Setup
- Acid Dosing, when Diamond Dose is connected
- ORP Control, when Diamond Dose is connected
- Equipment
- Factory Reset

Acid Dosing and ORP Control appear only when the required Diamond Dose accessory is connected.

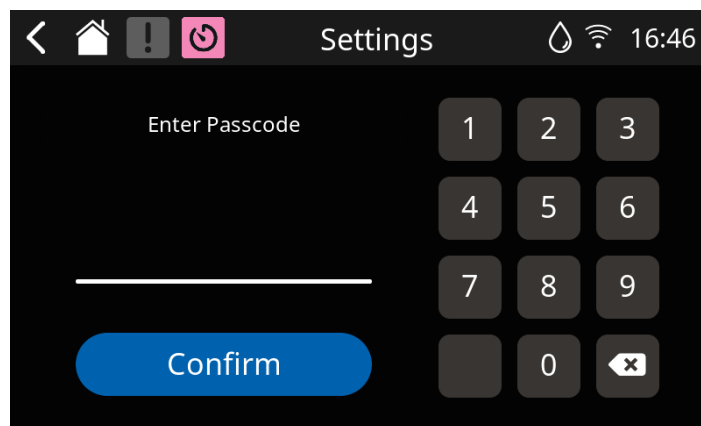
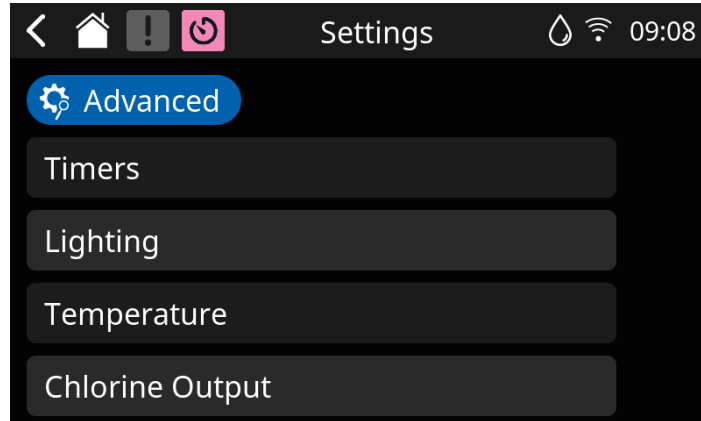
Accessing Advanced Settings

To access Advanced Settings:

1. Open the side menu using the small arrow tab on the left side of the screen.
2. Select **Settings**.

3. Select **Advanced**.
4. Enter the passcode.
5. Select **Confirm**.

The factory default passcode is **1111**.



Pump Setup

Pump Setup is used to configure how the Mineraliser controls the filtration pump.

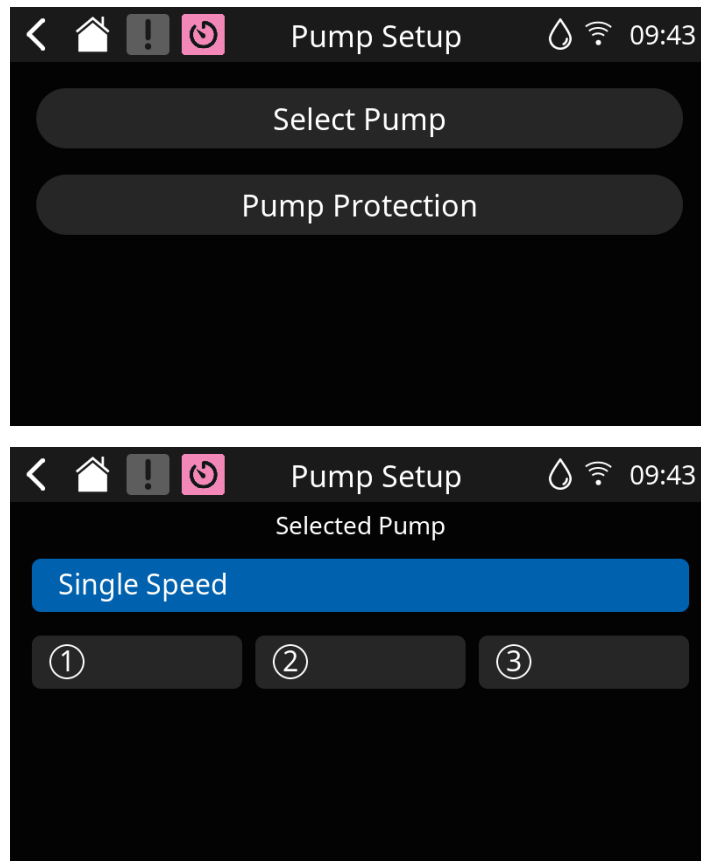
The Mineraliser can operate with:

- a single-speed pump connected to the **Single Speed Pump Outlet**
- a supported relay-controlled variable-speed pump
- a supported RS485-controlled variable-speed pump

Pump Setup should be completed by the installer or pool equipment technician during installation.

To open Pump Setup, go to:

Settings > Advanced > Pump Setup > Select Pump



Single-Speed Pump

For a single-speed pump, plug the pump into the **Single Speed Pump Outlet** on the Mineraliser.

The Mineraliser will turn the pump on and off according to timers, modes, favourites and manual pump controls.

Use this setup when:

- the pump is a standard single-speed pump
- the pump does not have compatible speed-control communication
- a variable-speed pump is being used without speed control from the Mineraliser

If a variable-speed pump is connected through the single-speed pump outlet, ensure the pump outlet maximum current is not exceeded.

Maximum pump outlet current: **8.5 A**

Approximate maximum pump size: **2 HP**

Variable-Speed Pumps

Selecting Pump Type

The first step is to select the pump type installed on the pool system.

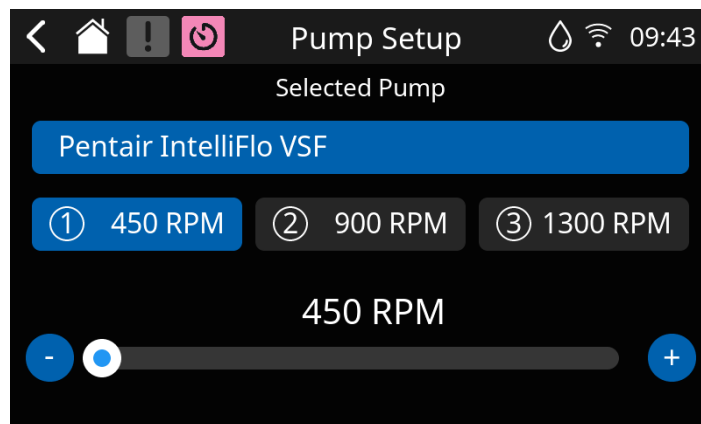
To select the pump type:

1. Open **Pump Setup**.
2. Select the blue Selected Pump field.
3. Choose the required pump type or supported pump model.
4. Select **Confirm** or **Save**, where required.

Supported pump options include:

- **Single Speed**
- **Pentair EnviroMax 1500**
- **Pentair IntelliFlo VSF**
- **Hayward Tristar / Hayward RS485**

Select the pump model that matches both the installed pump and the wiring method used.



Variable-Speed Pump Control Types

Supported variable-speed pumps are controlled in one of two ways:

- **Relay control**
- **RS485 control**

The selected pump model determines which control method is used.

Relay-Controlled Variable-Speed Pumps

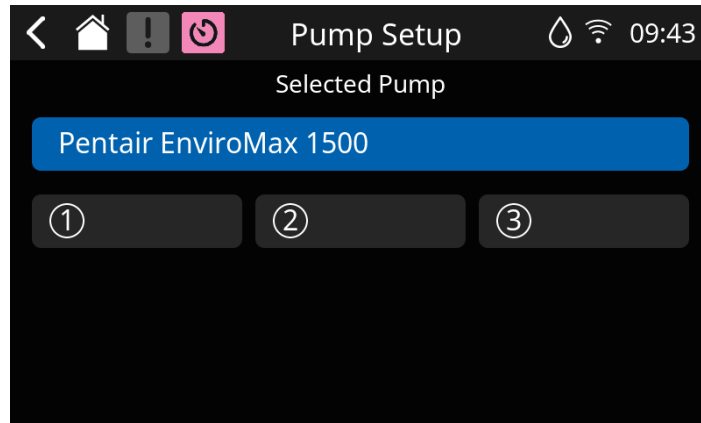
Relay-controlled pumps use relay outputs to select pump speed levels.

For relay-controlled pumps, the Mineraliser selects speed **1**, **2** or **3**, but the actual RPM for each speed is configured on the pump itself.

Relay-controlled pumps do not allow RPM values to be adjusted from the Mineraliser screen.

For relay-controlled pumps:

- The Mineraliser selects the speed level
- The pump stores the RPM for each speed level
- Speed RPM values must be configured on the pump
- Relay wiring must match the supported pump wiring diagram



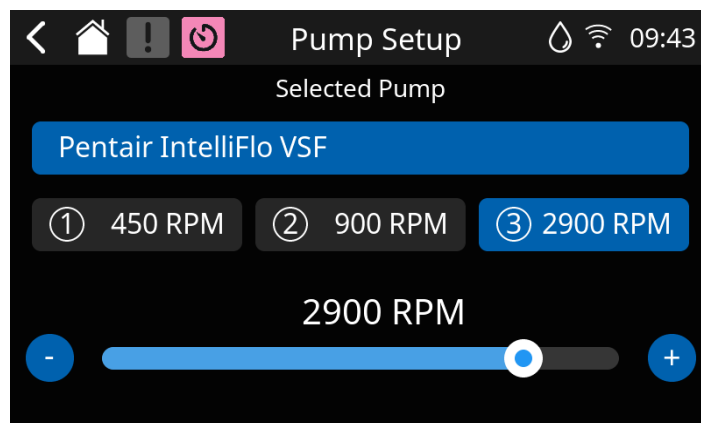
RS485-Controlled Variable-Speed Pumps

RS485-controlled pumps use a data connection between the Mineraliser and the pump.

For supported RS485-controlled pumps, the Mineraliser can directly set and adjust RPM values for speed presets **1**, **2** and **3**.

For RS485-controlled pumps:

- Speed preset **1**, **2** and **3** can be assigned RPM values
- RPM values are adjusted from the Mineraliser screen
- The pump must be wired to the correct RS485/data terminals
- The correct pump model must be selected in Pump Setup
- The pump must be configured to accept external RS485 control



Pump Speed Presets

Pump speed presets allow different pump speeds to be used for different functions.

Typical speed presets may be used for:

- low-speed filtration
- standard circulation
- chlorination
- heating
- spa operation

- high-speed circulation
- cleaning or service operation

For RS485-controlled pumps, preset RPM values are adjusted in the Mineraliser Pump Setup screen.

For relay-controlled pumps, preset RPM values are adjusted on the pump itself.

Set pump speeds high enough to provide reliable water flow through the cell housing. If a **No Water Flow** warning appears, increase the selected pump speed until water flow is detected.

Pentair EnviroMax 1500

The Pentair EnviroMax 1500 is a relay-controlled variable-speed pump.

The Mineraliser can select speed **1**, **2** or **3**, but the RPM values for those speeds are configured on the pump itself. RPM values are not adjusted from the Mineraliser screen.

Pump Preparation — Turning Off Priming

Before enabling external control, turn off the pump priming function.

1. Press the **Start / Stop** button on the pump to start the pump.
2. The pump display will alternate between **Pri**, **2800** and **04:59**, indicating priming at 2800 RPM for 5 minutes.
3. Press the **minus (-)** button to reduce the priming speed.
4. When the priming speed is reduced below 1700 RPM, priming is turned off.
5. The display will alternate between **Pri** and **Off**.

External control must be off while completing this step.

Pump Preparation — Turning On External Control

After priming has been turned off, enable external control.

1. Stop the pump by pressing the **Start / Stop** button.
2. Hold the **Start / Stop** button for approximately 5 seconds.
3. Confirm the light beside **Ext. Control Only** is green.
4. Press the **Start / Stop** button.
5. Confirm the light beside **Start / Stop** is green.

The pump is now ready to accept external speed selection.

Mineraliser Setup

To configure the Pentair EnviroMax 1500:

1. Open **Pump Setup**.
2. Select the current pump type.
3. Select **Pentair EnviroMax 1500**.
4. Select **Confirm** or **Save**, where required.
5. Configure the required RPM values for speeds **1**, **2** and **3** on the pump itself.
6. Test speed **1**, **2** and **3** from the Mineraliser.

7. Confirm the pump responds correctly to each selected speed.

Refer to Variable Speed Pump Wiring for the Pentair EnviroMax 1500 relay wiring photo.

Pentair IntelliFlo VSF

The Pentair IntelliFlo VSF is an RS485-controlled variable-speed pump.

The Mineraliser can directly set RPM values for speed presets **1**, **2** and **3**.

Pump Preparation — Turning Off Priming

Before enabling external RS485 control, turn off the pump priming function.

1. Disconnect the RS485 communication cable from the pump.
2. On the pump control module, press **Menu**.
3. Use the arrow buttons to scroll to **Priming**.
4. Select **Priming**.
5. Use the arrow buttons to select **Disabled**.
6. Press **Back** to exit the menu.
7. Reconnect the RS485 communication cable to the pump.

Pump Preparation — Turning On External Control

After priming has been disabled, enable external control.

1. Press **Menu** on the pump.
2. Use the **Up** or **Down** arrow to scroll to **Ext Ctrl**.
3. Press **Select**.
4. When **Program 1** is displayed, press **Select**.
5. When **Operation Mode** is displayed, press **Select**.
6. Use the **Up** or **Down** buttons to choose **Enabled**.
If the program is not required, choose **Pump Off**.
7. Press **Save**.

The program must be enabled before the remaining program settings can be adjusted.

8. Use the **Up** or **Down** arrow to scroll to **Set Type**.
9. Press **Select**.
10. Use the **Up** or **Down** arrow to choose **Speed** or **Flow**, as required.
11. Press **Save**.
12. Use the **Up** or **Down** arrow to scroll to **Set Speed/Flow**.
13. Press **Select**.
14. Use the **Up** or **Down** arrow to adjust the speed or flow setting to the required value.
15. Press **Save**.
16. There is no need to set a **Stop Delay** for this application. Press **Save**.
17. Press **Back** to move to **Program 2**.
18. Repeat the same setup for Programs 2 to 4, unless fewer programs are required for the installation.

Mineraliser Setup

To configure the Pentair IntelliFlo VSF:

1. Open **Pump Setup**.

2. Select the current pump type.
3. Select **Pentair IntelliFlo VSF**.
4. Select **Confirm** or **Save**, where required.
5. Select speed preset **1**, **2** or **3**.
6. Adjust the RPM using the slider, plus button or minus button.
7. Repeat for the remaining speed presets as required.
8. Test each speed and confirm the pump responds correctly.

Refer to Variable Speed Pump Wiring for the Pentair IntelliFlo VSF RS485 wiring photo.

Hayward Tristar

The Hayward Tristar pump is an RS485-controlled variable-speed pump.

The Mineraliser can directly set RPM values for speed presets **1**, **2** and **3**.

Pump Preparation — Turning On 485 Communication

Before testing Mineraliser control, enable 485 communication on the pump.

1. Hold **Stop** on the pump.
2. Press **Speed 2** until the display shows **LOW**.
3. Press **Speed 1** until the screen shows **IO**.
4. Press **Speed 2** until the screen shows **485**.
5. Press **Stop** to save the setting.

Once communication with the controller is active, the pump display may show **NBUS**.

Priming is automatically disabled when the communication setup process is completed.

Mineraliser Setup

To configure the Hayward Tristar pump:

1. Open **Pump Setup**.
2. Select the current pump type.
3. Select **Hayward Tristar**, as shown in the pump list.
4. Select **Confirm** or **Save**, where required.
5. Select speed preset **1**, **2** or **3**.
6. Adjust the RPM using the slider, plus button or minus button.
7. Repeat for the remaining speed presets as required.
8. Test each speed and confirm the pump responds correctly.

Refer to Variable Speed Pump Wiring for the Hayward Tristar / Hayward RS485 wiring photo.

Variable Speed Pump Wiring

The control/data connection between the pump and the Mineraliser allows the Mineraliser to control pump operation.

Variable-speed pump wiring must be completed by a qualified pool equipment technician or installer.

Use the wiring table and wiring photos supplied in this manual for the pump model being installed.

Before configuring pump control, confirm that:

- the pump is supported by the Mineraliser

- the pump has its own suitable mains power supply, where required
- the correct control/data or relay wiring is connected
- the wiring matches the selected pump model
- the pump is configured for external control, where required
- the pump responds correctly to Mineraliser commands

RS485 controlled pumps

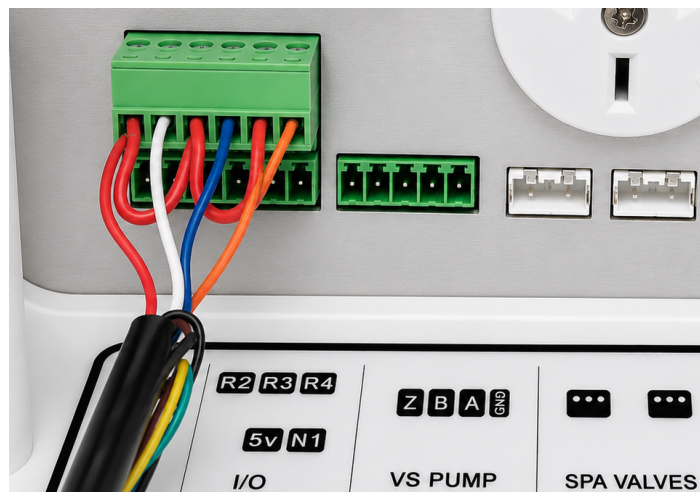
Pump	Terminal 1	Terminal 2	Terminal 3	Terminal 4	Terminal 5
HAYWARD TRISTAR	Yellow	Blue	-	-	Grey
Pentair IntelliFlo VSF	Yellow	Green	-	-	-

Relay controlled pumps

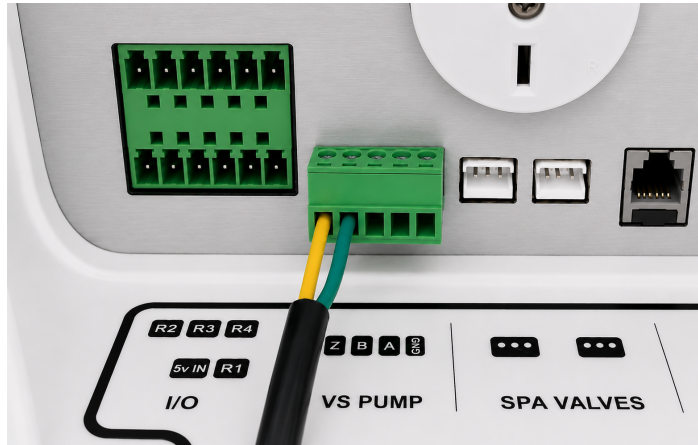
Pump	Terminal 1	Terminal 2	Terminal 3	Terminal 4	Terminal 5	Terminal 6
Pentair Enviromax 1500	Red	White	-	Blue	-	Orange
	5V - bridge		5V - bridge		5V - bridge	

Note: Pin 1 is the left-most terminal on each connector.

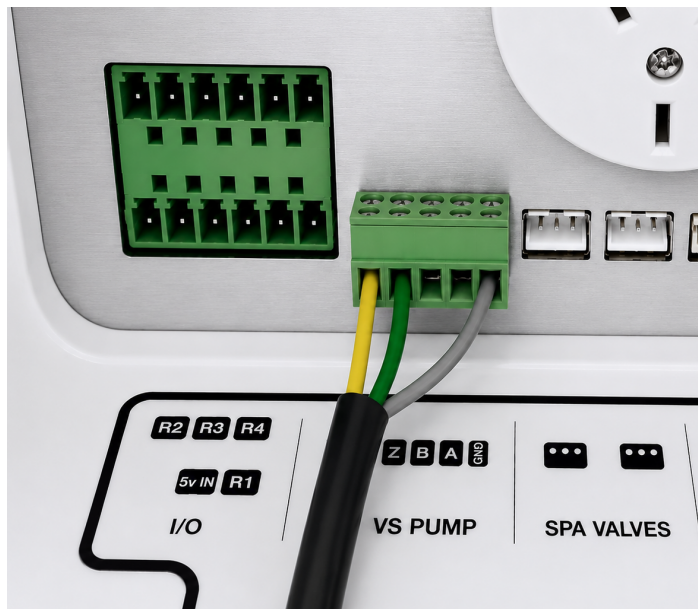
Pentair EnviroMax 1500 relay wiring



Pentair IntelliFlo VSF RS485 wiring



Hayward Tristar / Hayward RS485 wiring



Pump protection

Pump protection feature stops the pump from running if the system detects that there is no water flow after a set time.

Adjust the time to suit your system, or disable if required.

Confirm Pump Operation

After pump setup, test pump operation before leaving the system in automatic mode.

Confirm that:

- the pump turns on during an active timer
- the pump turns off when no timer, mode or favourite requires it
- **Force On** turns the pump on manually
- **Force Off** turns the pump off manually
- **Auto** returns the pump to normal timer operation

- water flow is detected through the cell housing
- chlorination only operates when water flow is present
- each selected pump speed operates as expected

If the pump does not respond correctly, check the selected pump type, wiring, pump power supply, external control setting and pump model selection.

Acid Dosing and pH Control

The Acid Dosing and pH Control section is used to configure the optional Diamond Dose acid dosing system.

When Diamond Dose is installed, the Mineraliser can dose pool acid to help control pH. Acid dosing can operate in two ways:

The Acid Dosing menu appears in Advanced Settings only when Diamond Dose is connected.

If Diamond Dose is not connected, Acid Dosing will not be shown in the Advanced Settings menu.

- **Timed Mode** — doses a set total amount of acid across the active acid dosing schedule. This mode does not require a pH probe.
- **Auto (pH Probe)** — doses acid automatically when the measured pH rises above the selected pH setpoint. This mode requires a compatible pH probe.

Acid dosing should be set up by a pool equipment technician or experienced pool professional.

Manual water testing is still required. Do not rely only on automatic acid dosing to confirm the pool water is balanced.

Before Using Acid Dosing

Before enabling acid dosing, confirm that:

- Diamond Dose is installed and connected.
- Acid tubing is installed according to the Diamond Dose installation instructions.
- The acid drum is safely positioned and vented.
- The correct acid dilution has been prepared.
- The pump is operating correctly.
- Water flow is detected.
- The pool water has been tested.
- pH and total alkalinity are within a suitable starting range.
- **Acid Pump** is allocated to the required timer.

Acid dosing will only operate when the system has water flow.

For acid dosing, water flow means:

- the pump is running, and
- water is detected by the cell water sensor.

Acid Safety

Use only suitable pool acid as recommended by your pool professional.

The recommended dilution is:

1 part pool acid to 3 parts water

Always add acid to water. Never add water to acid.

When preparing diluted acid:

1. Wear suitable eye and skin protection.
2. Use a clean, chemical-resistant container.
3. Add the required amount of water first.
4. Slowly add pool acid to the water.
5. Avoid splashing.
6. Secure the acid container after filling.

Do not mix pool acid with any other chemicals.

Diamond Dose tubing, suction strainer, drum lid grommets and acid drum venting must be installed according to the Diamond Dose installation instructions. The acid drum must be safely vented away from the control unit and other pool equipment.

Opening Acid Dosing

To open Acid Dosing:

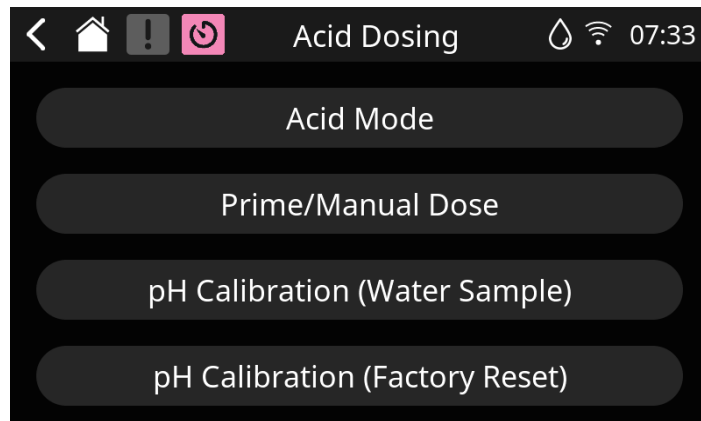
1. Open the side menu.
2. Select **Settings**.
3. Select **Advanced**.
4. Enter the passcode.
5. Select **Acid Dosing**.

The Acid Dosing screen will open.

Note: Acid Dosing is shown only when Diamond Dose is connected.

The Acid Dosing screen includes:

- **Acid Mode**
- **Prime/Manual Dose**
- **pH Calibration Water Sample**
- **pH Calibration Factory Reset**



Acid Modes

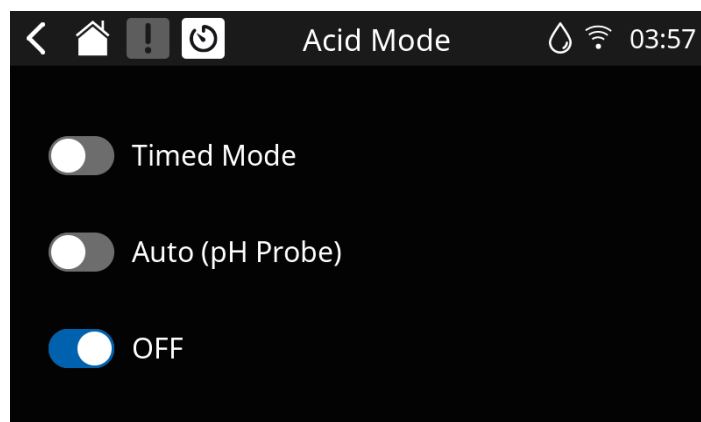
Acid Mode is used to select how the Mineraliser controls acid dosing.

To open Acid Mode:

1. Open **Acid Dosing**.
2. Select **Acid Mode**.

The available acid modes are:

- **Timed Mode**
- **Auto (pH Probe)**
- **OFF**



Timed Mode

Timed Mode doses a set total amount of acid across the active acid dosing schedule.

Use Timed Mode when:

- Diamond Dose is installed
- acid dosing is required
- no pH probe is installed, or
- the pool professional wants a fixed daily acid dose

In Timed Mode, the user sets:

- **Daily dose amount**

- **Dose interval**

The daily dose amount is divided into smaller doses across the combined active timer periods where **Acid Pump** is allocated.

Auto (pH Probe)

Auto mode uses a pH probe to control acid dosing automatically.

Use Auto mode when:

- Diamond Dose is installed
- a compatible pH probe is installed
- the pH probe reading has been checked against a pool water test
- automatic pH control is required

In Auto mode, the user sets:

- **Target setpoint pH**
- **Dose every**
- **Dose amount**

When measured pH rises above the target setpoint, the system can dose acid. If measured pH is at or below the target setpoint, no acid dose is triggered.

OFF

OFF disables acid dosing.

Use OFF when:

- acid dosing is not required
- Diamond Dose is not being used
- the acid drum is empty
- the system is being serviced
- the pool is being chemically adjusted manually
- troubleshooting is required

When acid dosing is off, the acid pump will not dose automatically.

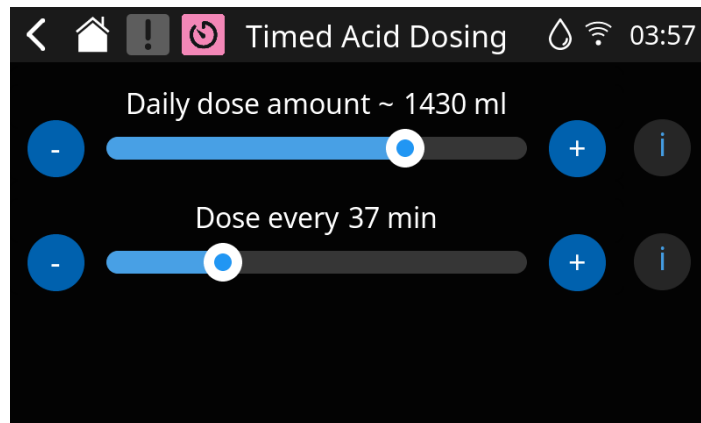
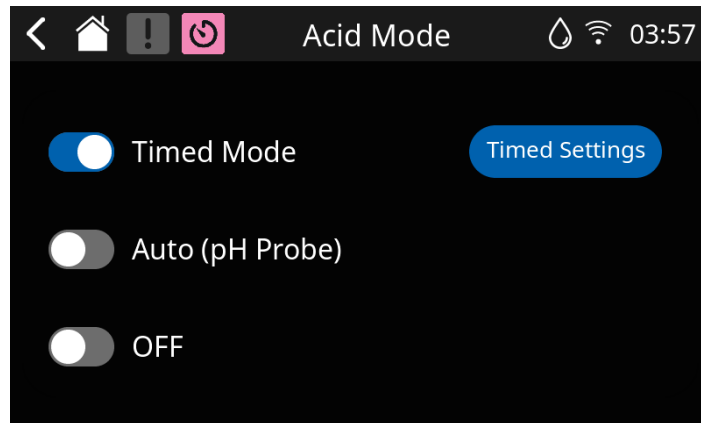
Timed Acid Dosing

Timed Acid Dosing is used to dose a set total amount of acid across the active acid dosing schedule.

To use Timed Acid Dosing:

1. Open **Acid Dosing**.
2. Select **Acid Mode**.
3. Turn on **Timed Mode**.
4. Select **Timed Settings**.
5. Adjust **Daily dose amount**.
6. Adjust **Dose Interval**.

- Return to the previous screen or home screen.



Daily Dose Amount

Daily dose amount is the approximate total amount of acid the system will dose across the active acid dosing schedule.

The system divides this amount into smaller doses.

The actual amount dosed may decrease over time as the dosing pump tube and fittings age. Check pH regularly and adjust the dosing amount if required.

Dose Interval

The dose interval controls how long the system waits between dose events.

Spreading the daily amount across multiple smaller doses gives each dose time to mix and circulate before the next dose is added.

Shorter dose intervals create more frequent, smaller dose events.

Longer dose intervals create fewer, larger dose events.

How Timed Dosing Is Calculated

Timed dosing uses the combined active timer time where **Acid Pump** is allocated.

For example:

- Timer 1 has **Acid Pump** allocated from 7:00 am to 11:00 am.
- Timer 2 has **Acid Pump** allocated from 4:00 pm to 8:00 pm.
- Total acid dosing schedule = 8 hours.

If the daily dose amount is 800 mL and the dose interval is 30 minutes, the system splits the daily dose across the available dose events during those 8 hours. Where the schedule does not divide evenly, the system uses the closest suitable number of dose events.

If the active acid dosing schedule is very short, or the dose interval results in only one dose event, the system may dose the full daily amount in a single dose.

Do not use very large daily dose amounts unless directed by a pool professional.

Timer Allocation for Timed Acid Dosing

Timed acid dosing only operates during active timers where **Acid Pump** is allocated.

To allocate Acid Pump to a timer:

1. Open **Settings > Timers**.
2. Select the required timer.
3. Select **Allocate Equipment**.
4. Turn on **Acid Pump**.
5. Select **Save**.

The **Acid Pump** option is only shown when Diamond Dose is connected.

Sanitise does not need to be allocated for acid dosing to operate.

Acid dosing still requires pump operation and water flow.

Auto pH Dosing

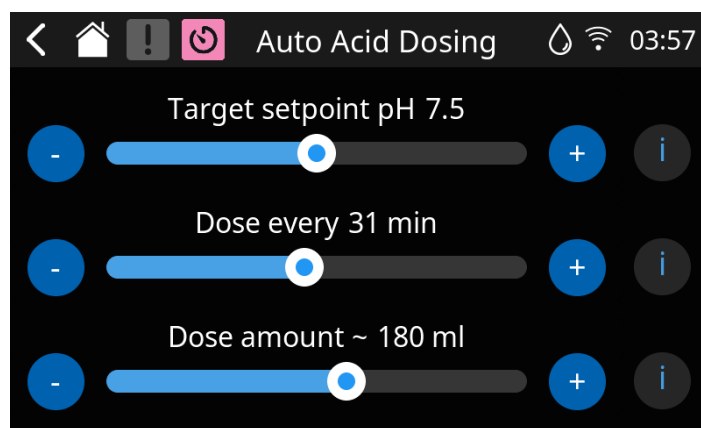
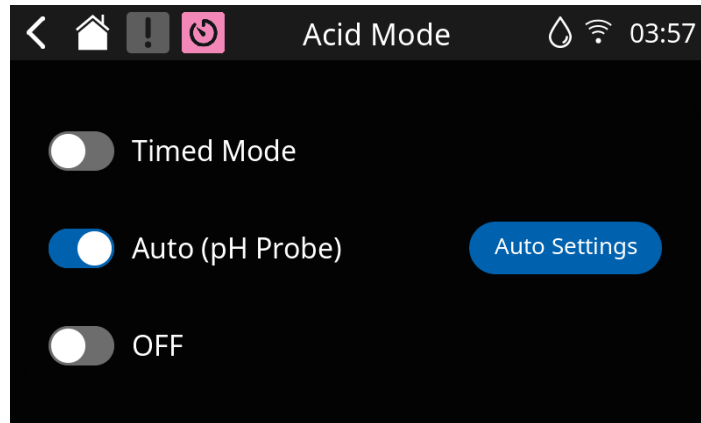
Auto pH Dosing uses the pH probe to dose acid when the measured pH rises above the selected target setpoint.

Use Auto pH Dosing only when:

- Diamond Dose is installed
- a compatible pH probe is installed
- the pH reading has been checked against a pool water test
- the pool water has circulated before testing
- total alkalinity is within a suitable range

To enable Auto pH Dosing:

1. Open **Acid Dosing**.
2. Select **Acid Mode**.
3. Turn on **Auto (pH Probe)**.
4. Select **Auto Settings**.
5. Adjust **Target setpoint pH**.
6. Adjust **Dose Interval**.
7. Adjust **Dose amount**.
8. Return to the previous screen or home screen.



Target Setpoint pH

Target setpoint pH is the pH level the system aims to maintain.

When the measured pH rises above the target setpoint, the system can dose acid.

When measured pH is at or below the target setpoint, no acid dose is triggered.

Recommended target range:

pH 7.2–7.6

The correct target depends on pool surface type, water balance and advice from the pool professional.

Dose Interval

Dose Interval is the minimum time between possible dose attempts.

At each dose interval, the system checks the pH reading.

- If pH is above the target setpoint, the system can dose acid.
- If pH is at or below the target setpoint, no acid dose is triggered.

Shorter intervals allow the system to respond more quickly to rising pH.

Longer intervals give each dose more time to mix through the pool before another dose is considered.

Dose Amount

Dose amount is the approximate amount of acid dosed each time the system decides that acid is required.

Adjust the dose amount to suit the pool size and pH behaviour.

The actual amount dosed may decrease over time as the dosing pump tube and fittings age.

Increase the dose amount if pH is slow to drop after dosing.

Do not use large dose amounts unless directed by a pool professional.

Timer Allocation for Auto pH Dosing

Auto pH dosing only operates during active timers where **Acid Pump** is allocated.

If more than one timer has **Acid Pump** allocated, Auto pH dosing can operate during the combined active timer periods.

To allocate Acid Pump to a timer:

1. Open **Settings > Timers**.
2. Select the required timer.
3. Select **Allocate Equipment**.
4. Turn on **Acid Pump**.
5. Select **Save**.

The **Acid Pump** option is only shown when Diamond Dose is connected.

Sanitise does not need to be allocated for acid dosing to operate.

Acid dosing still requires pump operation and water flow.

Prime and Manual Dose

Prime and Manual Dose is used to run the acid dosing pump manually for priming or service.

Use this function:

- during initial setup
- after changing the acid drum
- after replacing tubing
- when air is visible in the acid line
- when instructed by a pool professional

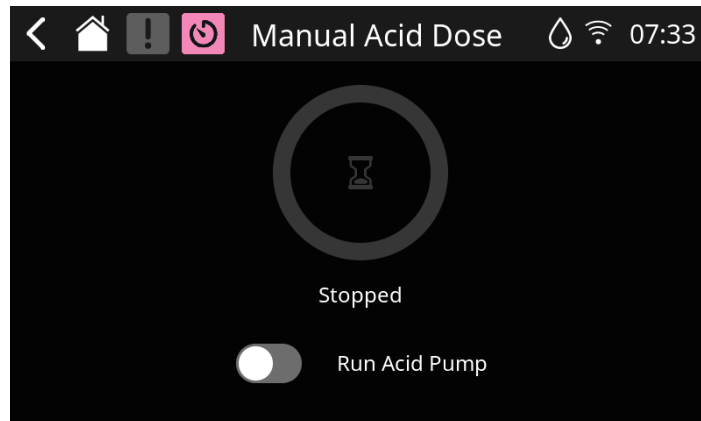
Prime and Manual Dose requires water flow. The acid pump will only run when:

- the pump is running
- water is detected by the cell water sensor

To run Prime/Manual Dose:

1. Open **Acid Dosing**.
2. Select **Prime/Manual Dose**.
3. Ensure the pool pump is running.
4. Confirm water flow is detected.
5. Turn on **Run Acid Pump**.

6. Allow the acid pump to run until the line is primed, or until the 60-second run time ends.
7. Turn off **Run Acid Pump** if you need to stop the pump earlier.



Prime/Manual Dose runs the acid pump for up to **60 seconds** and can be stopped at any time.

Do not run Prime/Manual Dose unless the acid line, drum and injection point have been installed correctly.

pH Calibration and Reset

pH calibration is used to align the pH probe reading with a known pool water test result.

The pH reading should be checked regularly against a reliable water test.

Where possible, use a pool shop test result for pH calibration. If using an on-site test kit, use a clean sample and a reliable test method.

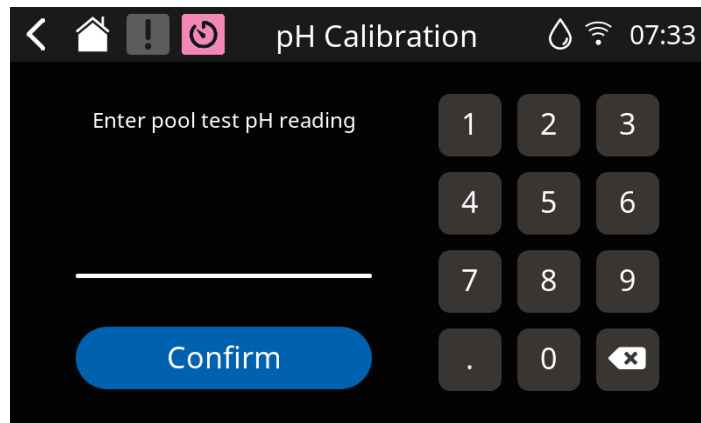
Before calibrating:

1. Run the pool pump for at least **20 minutes** to circulate the water.
2. Take a water sample from the pool.
3. Test the sample using a reliable test method or pool shop test.
4. Confirm the result before adjusting the system.

Water Sample Calibration

To calibrate using a water sample result:

1. Open **Acid Dosing**.
2. Select **pH Calibration Water Sample**.
3. Enter the pH value from the pool water test.
4. Select **Confirm** or **Save**, where required.



The Mineraliser will adjust the pH probe reading to match the entered water sample result.

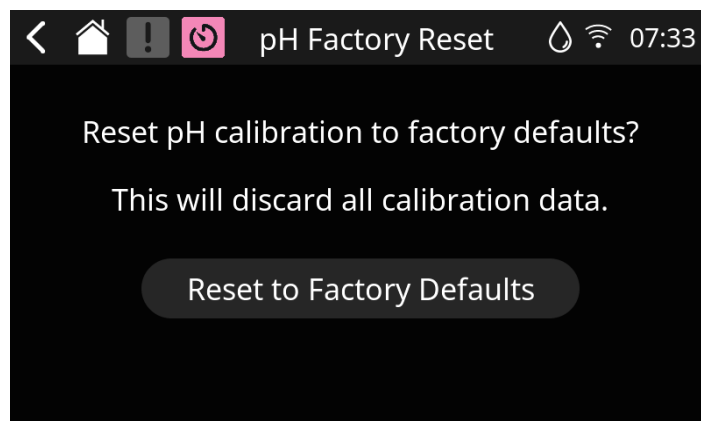
Reset pH Calibration

pH Calibration Factory Reset returns the pH calibration setting to the factory default.

Use this function if an incorrect pH calibration value has been entered, or if the pH reading appears incorrect after calibration.

To reset pH calibration:

1. Open **Acid Dosing**.
2. Select **pH Calibration Factory Reset**.
3. Confirm the reset if prompted.



After resetting pH calibration, check the pH reading against a pool water test before relying on Auto pH Dosing.

Acid Dosing Checks

After setting up acid dosing, confirm that:

- Diamond Dose is connected.
- The acid drum contains correctly diluted pool acid.
- Acid tubing is installed correctly.
- The acid drum is safely vented.

- The pump is running during the required timer period.
- Water flow is detected.
- **Acid Pump** is allocated to the required timer.
- The correct acid mode is selected.
- The dosing amount is suitable for the pool.
- pH is checked regularly using a pool water test.

If Acid Dosing Does Not Operate

If acid dosing does not operate as expected, check that:

- Diamond Dose is connected.
- Acid Mode is not set to **OFF**.
- **Acid Pump** is allocated to an active timer.
- The pump is running.
- Water flow is detected.
- The acid drum is not empty.
- The acid line is primed.
- The suction strainer is submerged.
- The tubing is not kinked or blocked.
- The pH setpoint and dose settings are suitable.
- In Auto mode, the measured pH is above the target setpoint.

If pH does not change after dosing, check the acid dilution, tubing condition, dose amount, pool volume, total alkalinity and circulation time.

Dosing Tube and Line Maintenance

Inspect the dosing tube, suction line, injection line, fittings, suction strainer and check valve regularly and whenever dosing performance changes.

Replace any tube that is hardened, flattened, cracked, swollen, blocked, leaking or visibly worn. Do not operate the dosing system with damaged or leaking tubing.

Dosing tubes, check valves and similar wetted components are consumable parts and deteriorate through normal use and chemical exposure.

pH and ORP Probe Care

Keep pH and ORP probe tips wet.

If a probe is removed from the system, store it in the storage solution recommended by the probe manufacturer. Do not store probes dry or in distilled or demineralised water.

Do not clean probes using abrasive materials, brushes, metal tools or strong chemicals. Clean and calibrate probes only when required and in accordance with the instructions supplied with the probe.

Replace a probe if it cannot be calibrated, remains unstable after adequate circulation and stabilisation, or is physically damaged.

ORP Control

ORP control is used to automatically manage chlorination using an ORP probe.

The ORP Control menu appears in Advanced Settings only when Diamond Dose is connected.

If Diamond Dose is not connected, ORP Control will not be shown in the Advanced Settings menu.

ORP stands for oxidation-reduction potential and is measured in millivolts (mV). It indicates the water's oxidising potential, not the exact free chlorine level in ppm.

ORP is affected by many factors, including:

- free chlorine level
- pH
- cyanuric acid / stabiliser level
- salt or mineral level
- water temperature
- bather load and organic contamination
- probe age and condition
- recent cleaning or chemical exposure
- time allowed for the probe to stabilise

Because of this, ORP should be used as a control reference, not as a replacement for manual chlorine and pH testing.

Manual water testing is still required.

Before Using ORP Control

pH must be corrected before relying on ORP control. High pH reduces chlorine effectiveness and can make the ORP reading appear low, even when a pool water test shows free chlorine is present.

Before enabling ORP (Auto) control, confirm that:

- the ORP probe is installed and connected
- the pump is running
- water flow is detected
- the electrolysis cell is clean
- the pool water has been manually tested
- free chlorine is within the recommended range
- pH is within the recommended range
- cyanuric acid / stabiliser is within a suitable range
- salt or mineral level is within the recommended operating range
- the ORP reading on the home screen appears stable

Always correct pH before adjusting the ORP setpoint. If pH is outside the recommended range, the ORP reading may be misleading.

New ORP probes, recently cleaned probes, or probes exposed to strong chemicals may take time to stabilise. Allow 24–72 hours of normal circulation before relying on the ORP value for fine setpoint

adjustment.

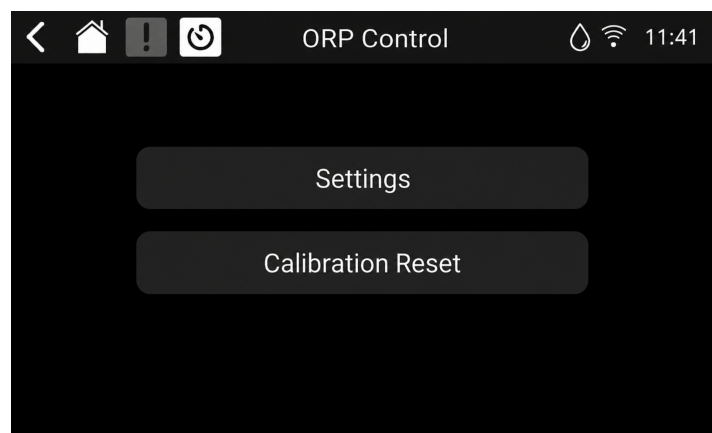
Opening ORP Control

To open ORP Control:

1. Open the side menu.
2. Select **Settings**.
3. Select **Advanced**.
4. Enter the passcode.
5. Select **ORP Control**.

The **ORP Control** screen will open.

Note: ORP Control is shown only when Diamond Dose is connected.



ORP Modes and Setpoint

The ORP Settings screen allows ORP control to be enabled or disabled.

The available options are:

- **Auto (ORP Probe)** — chlorination is controlled automatically using the ORP probe and selected ORP setpoint.
- **OFF (Timer)** — ORP control is disabled. Chlorination follows the normal timer, chlorine output and equipment allocation settings.

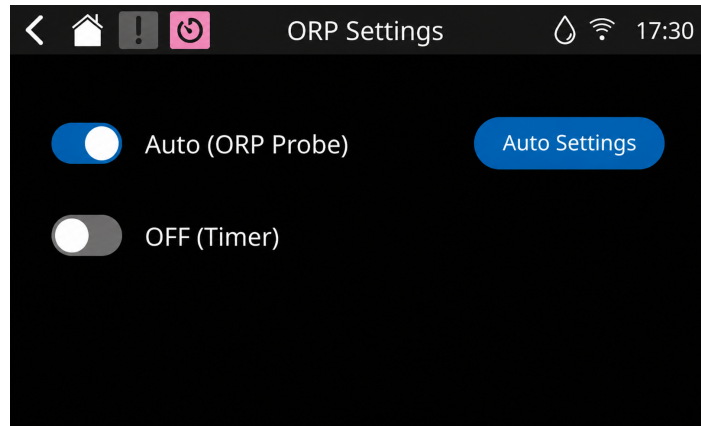
Use **Auto (ORP Probe)** only when an ORP probe is installed and the pool water has been correctly balanced.

Use **OFF (Timer)** when ORP control is not required, when no ORP probe is installed, or when troubleshooting ORP operation.

Enabling ORP Control

To enable ORP control:

1. Open **ORP Control**.
2. Turn on **Auto (ORP Probe)**.

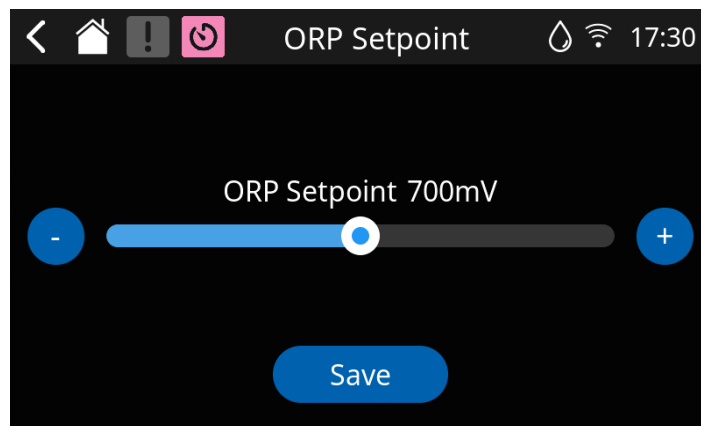


Setting the ORP Setpoint

The ORP setpoint is the target ORP value used by the Mineraliser when ORP control is enabled.

To set the ORP setpoint:

1. Open **ORP Control**.
2. Turn on **Auto (ORP Probe)**.
3. Select **Auto Settings**.
4. Use the slider, plus button or minus button to adjust the ORP setpoint.
5. Select **Save**.



When ORP control is enabled, the Mineraliser will produce chlorine when the ORP reading is below the selected setpoint and chlorination is allowed to run.

When the measured ORP reaches the selected setpoint, chlorination is reduced or stopped.

Disabling ORP Control

To disable ORP control:

1. Open **ORP Control**.
2. Turn off **Auto (ORP Probe)**.
3. Turn on **OFF (Timer)**, where required.
4. Confirm the system returns to normal timer-based chlorination.

5. Confirm the timer is set up to adequately chlorinate the pool.

When ORP control is disabled, chlorination is controlled by the normal chlorine output setting, timers, modes and equipment allocation.

Setting the ORP Setpoint

There is no single ORP setpoint that is correct for every pool.

A typical starting point is **700 mV**, but the correct setpoint depends on the actual pool water conditions and pool water test results.

Recommended Starting Method

Use this method to choose an initial ORP setpoint:

1. Balance the pool water.
2. Adjust pH into the recommended range.
3. Confirm free chlorine using pool water test results.
4. Confirm cyanuric acid / stabiliser is within a suitable range.
5. Allow the pump to circulate the pool water.
6. Check the ORP reading on the Mineraliser home screen.
7. Set the ORP setpoint close to the observed ORP reading when the pool chlorine level is correct.

If free chlorine measured with a pool test kit shows free chlorine is too low, the ORP setpoint may need to be increased.

If free chlorine measured with a pool test kit shows free chlorine is consistently too high, the ORP setpoint may need to be reduced.

Do not make large setpoint changes without confirming water chemistry manually.

Factors That Affect ORP

ORP readings are affected by several water chemistry factors.

Factor	ORP Effect	Notes
Higher free chlorine	Usually increases ORP	ORP responds to chlorine activity, not just ppm.
Higher pH	Lowers ORP	High pH reduces chlorine effectiveness.
Higher cyanuric acid / stabiliser	Lowers ORP and slows response	CYA binds chlorine and reduces active chlorine.
Higher salt or mineral level	May lower ORP	Salt and TDS can reduce the measured ORP value.
Heavy bather load	Lowers ORP	Organic matter consumes active chlorine.
New water or recent chemical additions	May cause unstable readings	Allow time for the water and probe to stabilise.
Probe age, condition or contamination	May change readings	Compare against manual test results before adjusting setpoint.

Cyanuric Acid and ORP

Cyanuric acid, also called stabiliser, protects chlorine from UV loss. However, it also binds with chlorine and reduces the amount of highly active chlorine available in the water.

This can lower the ORP reading, even when a manual free chlorine test shows an acceptable chlorine level.

As a guide:

Cyanuric Acid Level	Expected ORP Behaviour
0 ppm	Highest ORP response, but chlorine is less protected from sunlight.
10–20 ppm	ORP may be noticeably lower than unstabilised water.
30–50 ppm	Common outdoor pool range, but ORP response may be slower and lower.
Above 50 ppm	ORP control may become less responsive and may require a lower expected ORP value.

Do not compare ORP readings from a stabilised outdoor pool directly with ORP readings from unstabilised water or laboratory test water.

Salt and ORP

Salt and mineral levels may also reduce the measured ORP value.

This means a salt or mineral pool may show a lower ORP value than a non-salt pool with similar free chlorine and pH.

The following table is a practical field estimate only. It should not be used as a fixed correction table.

Salt Level	Pool Type	Possible ORP Effect Compared With 0 ppm Salt
0 ppm	Non-salt pool	0 mV
1,000 ppm	Low salt / TDS	about -5 to -15 mV
2,000 ppm	Mild salt	about -10 to -30 mV
3,000 ppm	Typical salt chlorinator	about -20 to -50 mV
4,000 ppm	High-normal salt pool	about -30 to -70 mV
5,000 ppm	High salt	about -40 to -90 mV

Use this only to understand why salt and mineral pools may read lower. Always use chlorine and pH testing to confirm the actual pool condition.

Sensor Variation and Stabilisation

ORP sensors can vary from sensor to sensor. Two probes in the same water may not show exactly the same value, especially immediately after installation, cleaning or chemical exposure.

A variation of several tens of millivolts can occur between sensors.

ORP probes may also take time to stabilise. This is especially common when:

- a probe is new

- a probe has been dry
- a probe has been cleaned
- a probe has been exposed to strong chemicals
- the pool has recently been refilled or heavily adjusted

Allow 24–72 hours of normal circulation before making fine ORP setpoint adjustments.

Important Setpoint Guidance

Do not chase a specific ORP number without checking the water manually.

The correct ORP setpoint is the value that maintains the desired free chlorine level in that pool, with pH and stabiliser maintained in the recommended range.

ORP Checks and Troubleshooting

After enabling ORP control, confirm that the system is operating correctly.

ORP Operation Checks

Check that:

- The ORP value is displayed on the home screen
- The ORP reading is reasonably stable
- The pump is running during the required operating period
- Water flow is detected
- Sanitise is allocated to an active timer or mode, or is being controlled by Spa Mode.
- Chlorination starts when ORP is below the setpoint
- Chlorination reduces or stops when ORP reaches the setpoint
- Free chlorine testing with a pool water test confirms the pool has the correct free chlorine level

If ORP Control Does Not Operate

If ORP control does not operate as expected, check that:

- **Auto (ORP Probe)** is enabled
- The ORP probe is installed and connected
- The ORP setpoint is suitable
- The pump is running
- Water flow is detected
- Sanitise is allocated to an active timer or mode, or is being controlled by Spa Mode.
- pH is within the recommended range
- Cyanuric acid / stabiliser is not too high
- Salt or mineral level is within range
- The electrolysis cell is clean

If ORP Is Low but Free Chlorine Tests Correctly, Check pH First

If the free chlorine level measured with a pool test kit is correct but the ORP reading appears low, check the following before increasing the ORP setpoint:

Possible Cause	Explanation	Recommended Action
High pH	High pH reduces chlorine effectiveness and may lower the ORP reading.	Lower pH into the recommended range before adjusting ORP.
High cyanuric acid / stabiliser	Stabiliser binds chlorine and can lower ORP response.	Test stabiliser and reduce if required.
High salt or mineral level	Salt and dissolved minerals may reduce the measured ORP value.	Confirm salt or mineral level is within range.
Probe not stabilised	New, cleaned or chemically exposed probes may take time to settle.	Allow 24–72 hours of normal circulation before fine adjustment.
Recent chemical addition	Some chemical additions can temporarily affect ORP readings.	Allow the pool to circulate and retest manually.

If ORP Changes Suddenly

If the ORP value changes suddenly, check for:

- recent chemical additions
- heavy bather load
- rain or significant water dilution
- probe cleaning or handling
- poor circulation
- low pump speed
- no water flow
- unstable pH
- high stabiliser
- dirty or scaled electrolysis cell

Do not make large ORP setpoint changes until the water has been manually tested and allowed to circulate.

Equipment

The Equipment menu is used to name and configure the equipment outputs controlled by the Mineraliser and any connected Diamond Hubs.

Equipment settings are normally configured by the installer or pool equipment technician. Owners may rename equipment where required, but output behaviour should only be changed by someone familiar with the pool equipment layout.

Use the Equipment menu to:

- view available equipment outputs

- rename equipment outputs
- configure lighting outputs
- configure outputs that require the filter pump
- configure outputs that should be disabled during Spa Mode

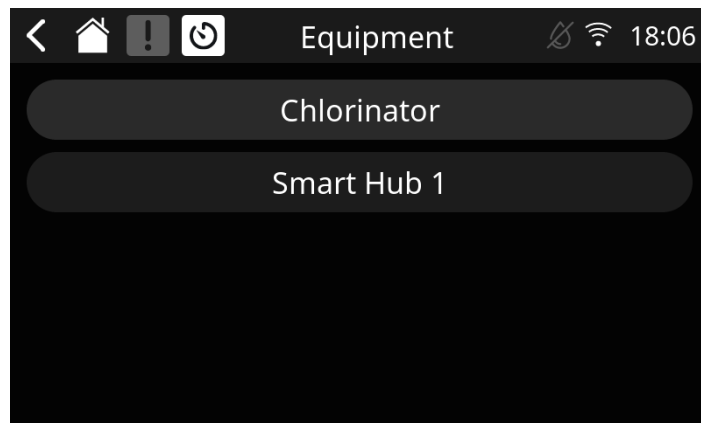
The available equipment depends on the system configuration and whether any Diamond Hubs are connected.

Equipment Menu

To open the Equipment menu:

1. Open the side menu.
2. Select **Settings**.
3. Select **Advanced**.
4. Enter the passcode.
5. Select **Equipment**.

The Equipment selection screen will open.



The **Chlorinator** option refers to the Mineraliser control unit.

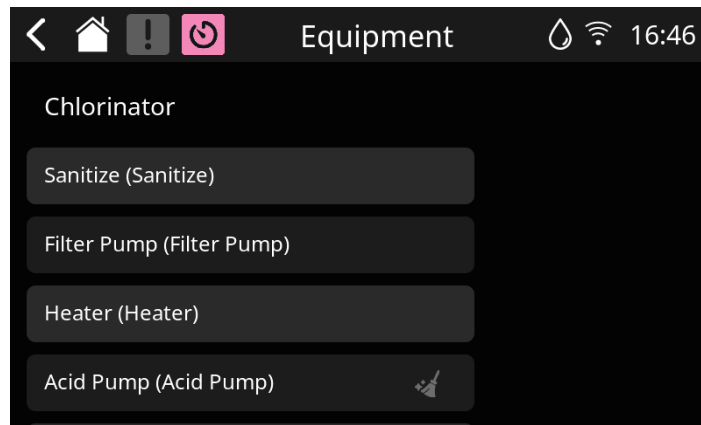
If Diamond Hubs are connected, they will also appear in the list. Up to three Diamond Hubs can be connected. Hub numbering is retained by the system, so connected hubs may appear as **Diamond Hub 1**, **Diamond Hub 2** or **Diamond Hub 3**.

Only connected Diamond Hubs are shown.

For a standard single-hub installation, select **Diamond Hub 1**.

Chlorinator Outputs

Select **Chlorinator** to view the equipment outputs available on the Mineraliser control unit.



The Chlorinator equipment list may include:

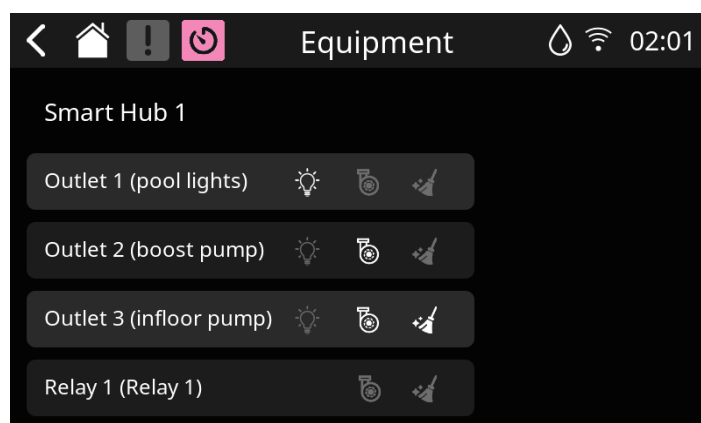
- **Sanitise**
- **Filter Pump**
- **Heater**
- **Acid Pump**
- **Relay 1**
- **Relay 2**
- **Relay 3**

The available items may vary depending on connected equipment and system configuration.

The two valve actuator outputs on the Chlorinator are dedicated to Spa Mode. They are not listed as normal equipment outputs and cannot be assigned to other functions.

Diamond Hub Outputs

Select a connected **Diamond Hub** to view the outputs available on that hub.



Each Diamond Hub can provide:

- **Outlet 1**
- **Outlet 2**
- **Outlet 3**
- **Relay 1**

- **Relay 2**
- **Relay 3**
- **Relay 4**
- **Valve 1**
- **Valve 2**
- **Valve 3**

Each output can be renamed so it is easier to identify when adding equipment to timers and favourites.

For example:

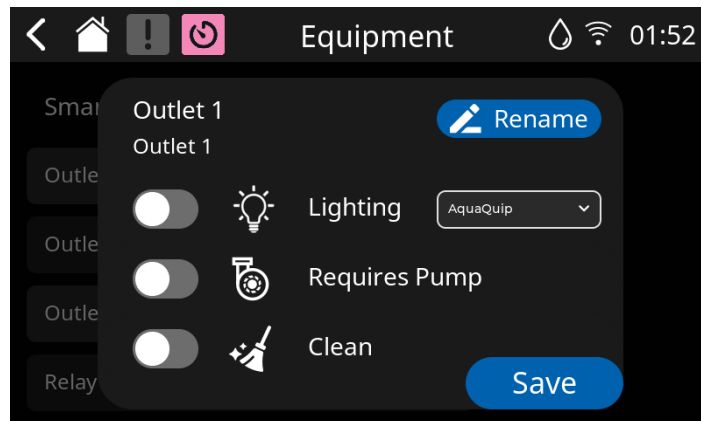
- **Outlet 1** may be renamed **Pool Lights**
- **Outlet 2** may be renamed **Boost Pump**
- **Outlet 3** may be renamed **In-Floor Pump**

When shown in timers or favourites, the custom name helps identify the connected equipment.

Configuring Equipment Outputs

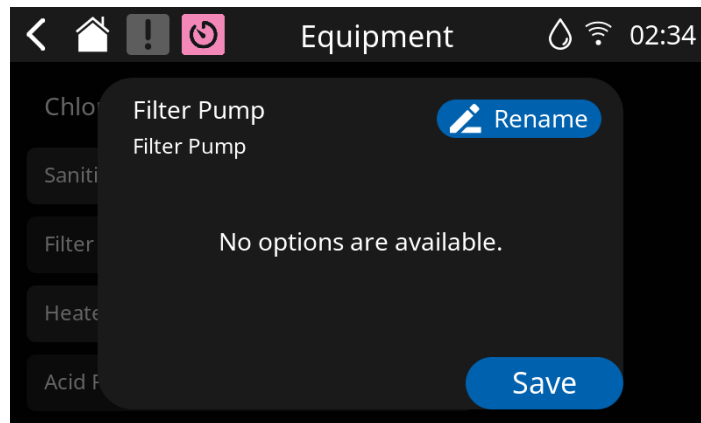
To configure an equipment output:

1. Open **Settings > Advanced > Equipment**
2. Select **Chlorinator** or the required **Diamond Hub**.
3. Select the equipment output you want to configure.
4. Adjust the available options.
5. Select **Save**.



The options available depend on the selected output. Some outputs may have more options than others.

Some fixed system outputs cannot be configured from this menu. If no options are available, the output can still be used by the system, but there are no user-adjustable settings for that item.



Renaming Equipment

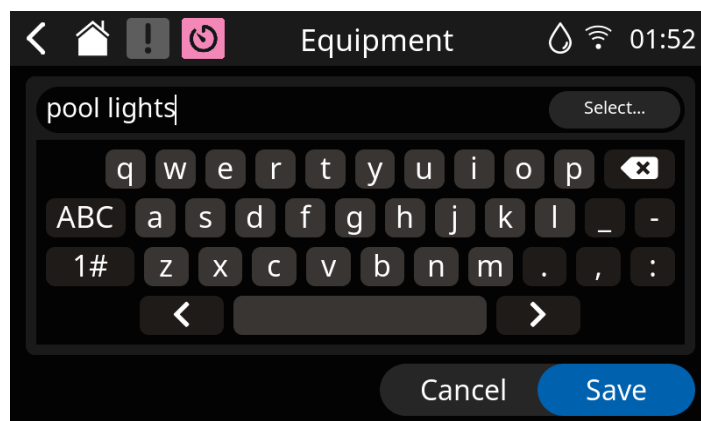
Rename allows an equipment output to be given a clear name.

Use names that describe the connected equipment, such as:

- **Pool Lights**
- **Boost Pump**
- **In-Floor Pump**
- **Waterfall**
- **Heat Pump**
- **Gas Heater**
- **Filter Pump 1**

To rename an output:

1. Select the equipment output.
2. Select **Rename**.
3. Enter the new name using the on-screen keyboard.
4. Select **Save**.



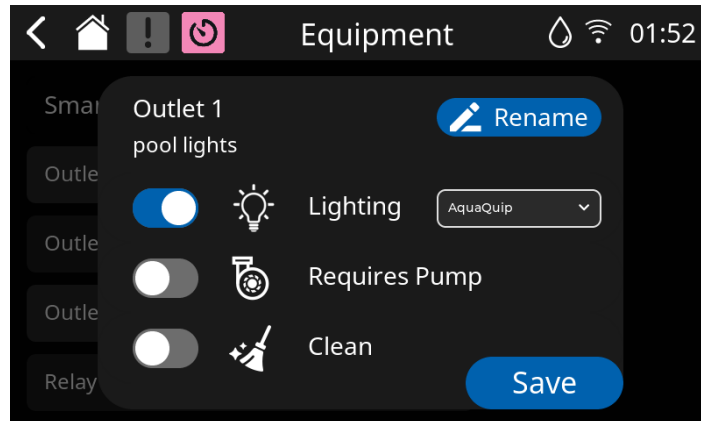
The hardware output name remains available, but the custom name is used to make the equipment easier to recognise when setting timers and favourites.

Output Options

Lighting

Lighting is used when the selected output controls compatible pool lighting.

When **Lighting** is enabled, the system allows a lighting type to be selected. Select the lighting type that matches the installed pool light.



For normal pool lighting, do not enable **Requires Pump**. Pool lights do not require water flow. Only enable **Requires Pump** for equipment that must operate with the filtration pump running.

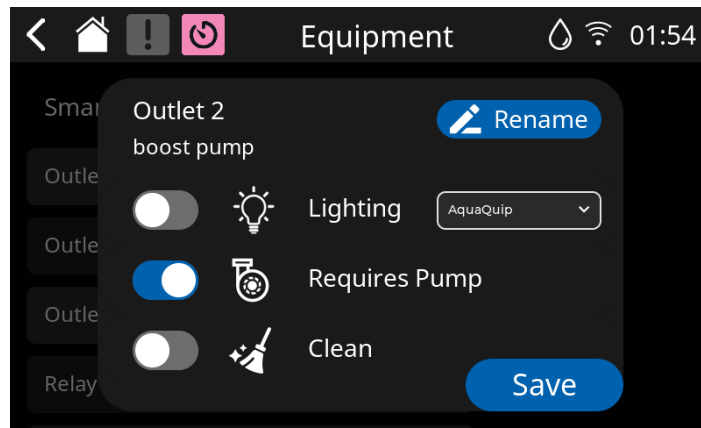
To change light colour or lighting operation, refer to [Lighting](#) under Common Controls.

Requires Pump

Requires Pump turns on the Filter Pump whenever the selected output is turned on.

Use **Requires Pump** for equipment that requires pool water circulation, such as:

- heaters
- water features
- boost pumps
- pressure cleaners
- valves controlling water flow



Requires Pump is available on outputs that show the pump icon.

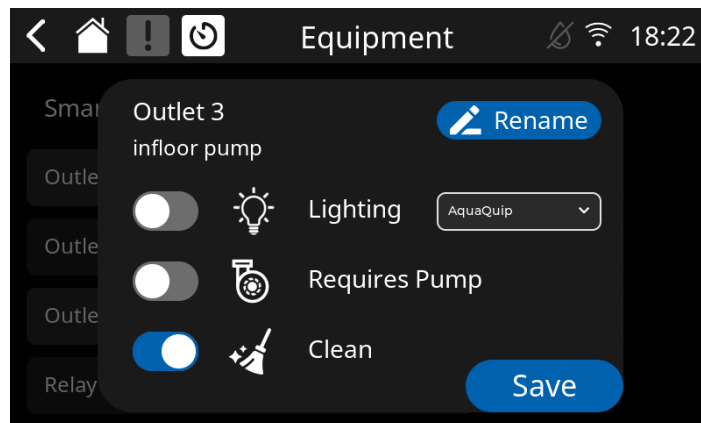
The same result can also be achieved by adding the **Filter Pump** separately to the same timer or favourite.

If pump protection is enabled, water flow detection will still apply.

Clean

Clean disables the selected output during Spa Mode.

Use **Clean** for pool-side cleaning or circulation equipment that should not operate while Spa Mode is active. This helps prevent colder pool water from being drawn into or mixed with the heated spa water.



Clean is available on outputs that show the Clean icon.

Examples of equipment that may use **Clean** include:

- in-floor cleaning pumps
- pressure cleaner pumps
- pool circulation outputs
- other pool-side equipment that should not operate during Spa Mode

Acid dosing is automatically disabled during Spa Mode.

Multiple Diamond Hubs

Up to three Diamond Hubs can be connected to the Mineraliser.

Diamond Hub numbering is retained by the system. This helps preserve configuration data if a hub is disconnected and reconnected.

If multiple Diamond Hubs are being installed, connect and configure one hub at a time. Rename the outputs on the first hub before connecting the next hub. This makes it easier to identify which physical hub and output each setting belongs to.

If the first connected hub appears as Diamond Hub 2 or Diamond Hub 3, an installer may choose to perform a factory reset so hub numbering restarts from Diamond Hub 1.

Equipment Setup Checks

After configuring equipment, confirm that:

- each connected output has a clear name
- lighting outputs have the correct lighting type selected
- **Requires Pump** is enabled only where the equipment requires water flow
- **Clean** is enabled only where the equipment should be disabled during Spa Mode
- timers and favourites show the expected equipment names
- each output operates the correct connected equipment
- equipment requiring water flow operates with the Filter Pump running
- Spa Mode does not operate pool-side cleaning or circulation equipment marked with **Clean**

Factory Reset

Factory Reset returns the Mineraliser configuration to its default shipped state.

Use Factory Reset only when the system needs to be recommissioned, transferred to a new installation, or reset under the direction of an installer, pool equipment technician or support representative.

Factory Reset clears configuration settings, including:

- Renamed equipment items.
- Equipment output settings.
- Timers.
- Favourites.
- Pump setup.
- Acid dosing settings.
- ORP control settings.
- pH calibration settings.
- Diamond Hub configuration and numbering.
- Other user-adjustable system settings.
- Wi-Fi details.

After a factory reset, the system must be set up again before normal automatic operation can resume. This includes pump setup, timers, equipment configuration, dosing setup and any required favourites.

To perform a factory reset:

1. Open the side menu.
2. Select **Settings**.
3. Select **Advanced**.
4. Enter the passcode.
5. Select **Factory Reset**.
6. Confirm the reset when prompted.

After the reset is complete, check all required setup items before leaving the system in automatic operation.



Favourites

Favourites allow commonly used equipment combinations to be turned on quickly from the Mineraliser screen or from the phone app.

A favourite can be used for functions such as:

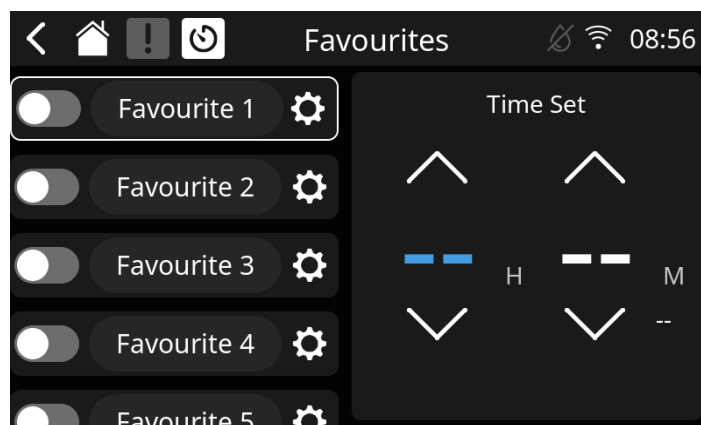
- Spa operation.
- Pool lighting.
- Water features.
- Heating.
- Cleaning equipment.
- Night swimming.
- Entertaining.

Up to 20 favourites are available. The default names are **Favourite 1** through **Favourite 20**.

Each favourite stores:

- A favourite name.
- The equipment allocated to that favourite.
- The last runtime selected for that favourite.

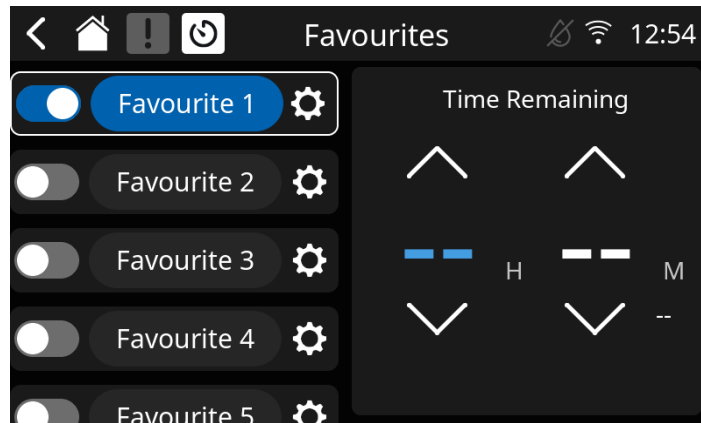
Favourites operate as an override. While any favourite is active, the physical **Override** LED turns on.



Overview

Each favourite has three main controls:

- **Toggle** — Turns the favourite on or off.
- **Favourite name** — Selects the favourite and shows its runtime setting on the right side of the screen.
- **Gear icon** — Opens the favourite setup screen.



The favourite name does not start or stop the favourite. Use the toggle to turn the favourite on or off.

The selected favourite is shown with a white outline. The runtime panel on the right applies to the selected favourite.

A favourite is active when its toggle is switched on and the favourite name is shown with blue active styling.

A favourite can be active without being selected. A favourite can also be selected for runtime adjustment without being active.

Favourites can also be turned on and off from the phone app.

Operation

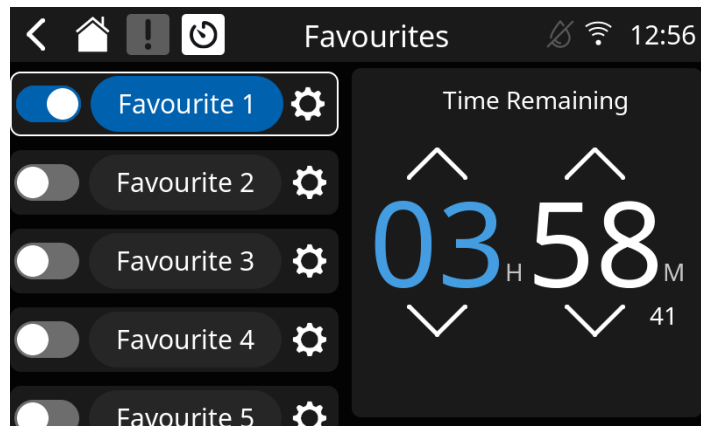
To start a favourite:

1. Open **Favourites** from the home screen.
2. Locate the favourite you want to use.
3. Select the favourite name if you want to check or adjust its runtime.
4. Turn the favourite toggle on.

When the favourite is active, the toggle moves to the right and the favourite name is shown with blue active styling.

To stop a favourite manually, turn the favourite toggle off.

A timed favourite will also stop automatically when its runtime expires.



When a favourite stops, the equipment allocated to that favourite is released. Equipment that is still required by another active timer, favourite, Spa Mode or system function will continue running.

More than one favourite can be active at the same time.

Runtime

Select the favourite name before changing the runtime.

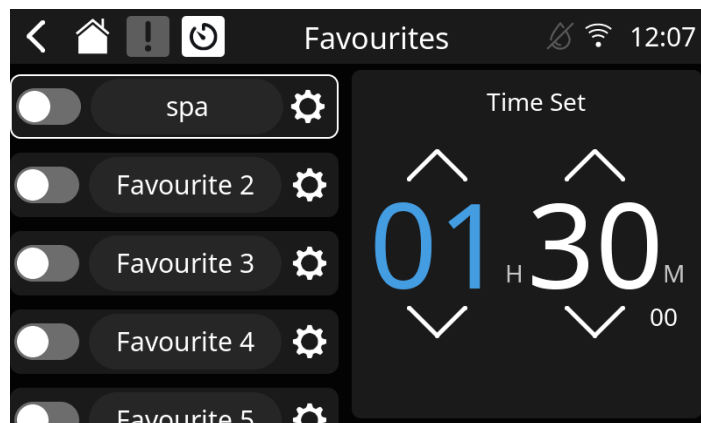
The selected favourite is shown with a white outline. The runtime panel on the right applies only to the selected favourite.

Before adjusting the runtime, check that the white outline is around the favourite you want to change. If the favourites list has been scrolled, the selected favourite may not be the active favourite shown nearby.

A favourite is active when its toggle is switched on and the favourite name is shown with blue active styling.

A favourite can be active without being selected. A favourite can also be selected for runtime adjustment without being active.

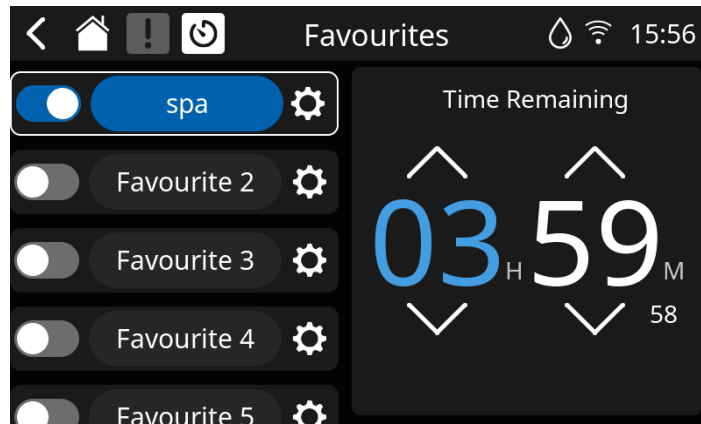
Important: Always confirm the selected favourite before changing the runtime. The runtime panel changes the favourite with the white outline, not necessarily the favourite that is currently active or closest to the runtime panel.



Each favourite remembers the last runtime selected for that favourite.

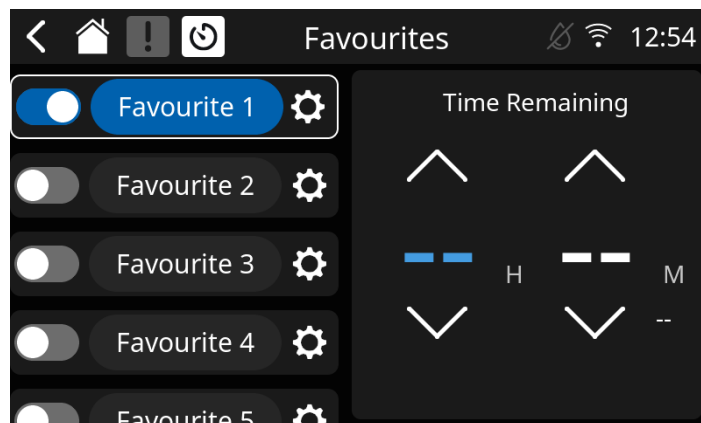
Runtime changes are saved immediately. If the selected favourite is already active, changing the runtime applies immediately.

When a timed favourite is active, the screen shows **Time Remaining**.



If the runtime is reduced to zero, the time display changes to dashes. This means **Run continuously**.

A favourite set to **Run continuously** remains active until it is turned off manually.



Use **Run continuously** only where the equipment should stay on until the user turns the favourite off.

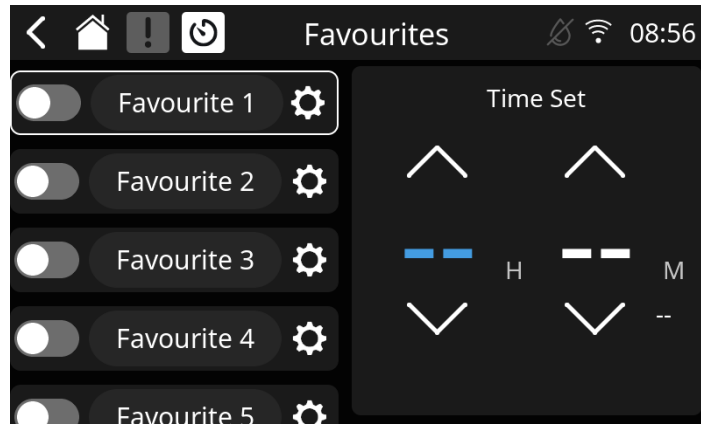
Setup

Use the gear icon to set up a favourite.

The favourite setup screen allows you to:

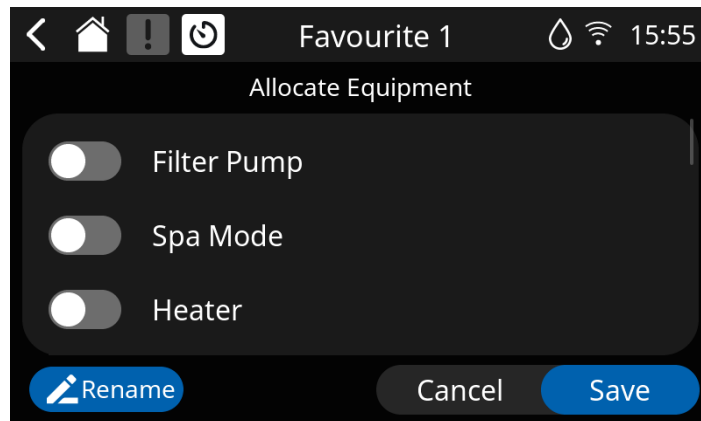
- Rename the favourite.
- Allocate equipment to the favourite.

Runtime is not set from the gear icon. Runtime is set from the main Favourites screen by selecting the favourite name.



To configure a favourite:

1. Open **Favourites** from the home screen.
2. Select the gear icon beside the favourite.
3. Select the equipment required for that favourite.
4. Rename the favourite if required.
5. Select **Save**.



Rename favourites so they are easy to identify.

Examples:

- Spa.
- Pool Lights.
- Waterfall.
- Night Swim.
- Cleaning.
- Heating.

To rename a favourite:

1. Select the gear icon beside the favourite.
2. Select **Rename**.
3. Enter the new name using the on-screen keyboard.
4. Select **Save**.



The new name will appear on the Favourites screen and in the phone app.

A favourite can include multiple equipment outputs.

Favourites can include most normal equipment outputs, including:

- Filter Pump.
- Heater.
- Lighting outputs.
- Relays.
- Outlets.
- Valves.
- Spa Mode.

Sanitise cannot be selected as normal favourite equipment. Sanitise is controlled by timers and is included automatically during Spa Mode.

Acid Pump cannot be selected in a favourite. Acid dosing is controlled through the Acid Dosing settings.

Multiple Favourites

More than one favourite can be active at the same time.

For example, one favourite may run pool lights while another favourite runs a water feature.

Equipment can also be used in more than one favourite.

If the same equipment is used by more than one active timer, favourite or mode, that equipment remains on until it is no longer required by any active function.

Turning off one favourite will not stop equipment that is still required by another active favourite, timer or mode.

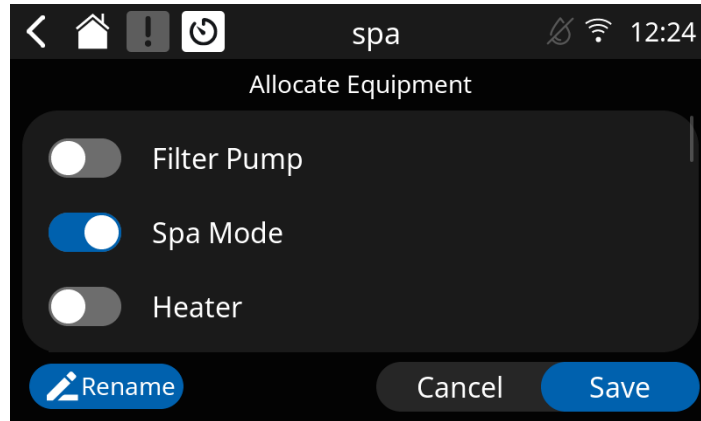
Spa Mode

Spa Mode is selected from the favourite setup screen.

Use a Spa Mode favourite when the pool and spa share equipment and the system needs to switch into spa operation.

A typical spa favourite may include:

- Spa Mode.
- Heater, where fitted.
- Spa lights, where fitted.
- Additional spa-related valves or outputs, where fitted.



Spa Mode automatically activates the two dedicated Spa Valve Actuator outputs on the Mineraliser control unit.

If additional valves are required for the spa function, a Diamond Hub may be used. The required Diamond Hub valve actuator outputs can be added to the same spa favourite.

When Spa Mode is active:

- The system uses the spa temperature setpoint.
- The Filter Pump is included automatically.
- Sanitise is included automatically at 10% chlorination output.
- Equipment marked **Clean** is prevented from operating.
- Acid dosing is automatically disabled.

Spa Mode prevents equipment marked **Clean** from operating even if that equipment is included in a timer or another active favourite.

checks

After configuring favourites, confirm that:

- Each favourite has a clear name.
- The correct equipment is allocated to each favourite.
- The runtime is set correctly.
- **Run continuously** is used only where indefinite operation is intended.
- Spa favourites include **Spa Mode** and any extra spa equipment required.
- Equipment marked **Clean** does not operate during Spa Mode.
- The physical **Override** LED turns on while a favourite is active.
- Timed favourites turn off when the selected runtime expires.

- Favourites can be turned on and off from the Mineraliser screen and the phone app.

Backwashing

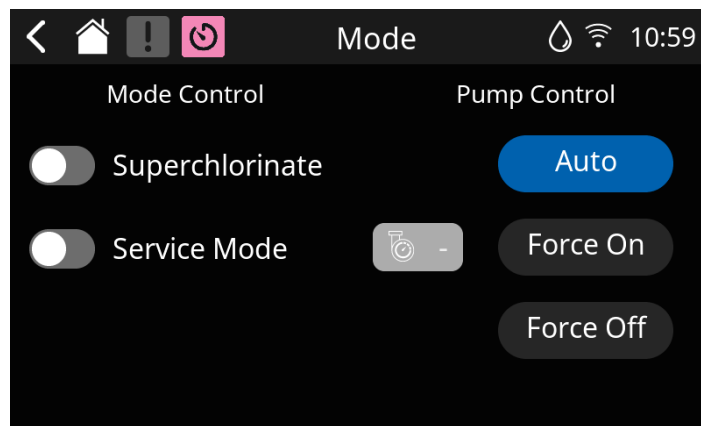
Backwashing is used to clean a sand or media filter by reversing water flow through the filter and sending dirt and debris to waste.

Backwashing is normally required when the filter pressure rises above the clean starting pressure, or when recommended by your pool professional.

As a general guide, backwash when the filter pressure rises approximately 40–70 kPa, or 6–10 psi, above the clean starting pressure. Always follow the filter manufacturer's instructions where different guidance is provided.

Cartridge filters are not backwashed. If a cartridge filter is installed, clean the cartridge according to the filter manufacturer's instructions.

Before backwashing, consider the pool water level. Backwashing sends water to waste, so the pool may need to be topped up before or after the procedure.



Preparation

Before starting:

- Confirm the filter is suitable for backwashing.
- Confirm the waste line or backwash outlet is ready.
- Check the pool water level.
- Confirm the filter manufacturer's maximum flow rate is not exceeded.
- For a variable-speed pump, use a pump speed suitable for backwashing.

Do not exceed the filter manufacturer's maximum flow rate.

Backwash

To backwash the filter:

1. Open the side menu.
2. Select **Mode**.
3. Under **Pump Control**, select **Force Off**.

4. Confirm the pump has stopped.
5. Move the filter multiport valve to **Backwash**.
6. Select **Force On** to start the pump.
7. Allow the filter to backwash until the sight glass or waste water runs clear, or for the time recommended by the filter manufacturer.
8. Select **Force Off** to stop the pump.
9. Confirm the pump has stopped before moving the multiport valve.

Never move the multiport valve while the pump is running.

Rinse

After backwashing, rinse the filter before returning to normal filtration.

To rinse the filter:

1. Confirm the pump is stopped.
2. Move the multiport valve to **Rinse**.
3. Select **Force On** to start the pump.
4. Run the pump until the sight glass is clear, or for the time recommended by the filter manufacturer.
5. Select **Force Off** to stop the pump.
6. Confirm the pump has stopped before moving the multiport valve.

Rinsing helps settle the filter media and prevents dirty water from returning to the pool.

Return to Normal Operation

After backwashing and rinsing:

1. Confirm the pump is stopped.
2. Move the multiport valve back to **Filter**.
3. Select **Auto** under **Pump Control**.
4. Confirm the pump returns to normal automatic operation.
5. Check the filter pressure.
6. Check the pool water level and top up if required.

If the filter pressure remains high after backwashing, the filter may require further cleaning, service or inspection by a pool professional.

Troubleshooting

Use this section to help identify common operating issues.

If a warning or error icon is shown, check the touchscreen for the active message. A yellow! indicates a warning. A red ! indicates an error.

If the issue continues after completing the recommended checks, contact your pool professional or support provider.

Issue / Message	Possible Cause	Recommended Action
No Water Flow	Pump is not running.	Confirm the pump is running.

	Pump speed is too low.	For a variable-speed pump, increase the pump speed until water is detected.
	Pool water level is low.	Check the pool water level and top up if required.
	Pump has lost prime.	Check the pump basket and prime the pump.
	Valve is closed or in the wrong position.	Check valve positions and confirm water can flow through the cell housing.
	Filter is blocked or requires cleaning.	Clean or backwash the filter as required.
	Cell housing is installed in the wrong flow direction.	Confirm water enters the cell housing through the connection closest to the cell screw cap.
	Cell housing is not full of water.	Confirm the cell housing fills completely when the pump runs.
	Air is trapped in the plumbing.	Check pump prime, valves, water level and suction-side air leaks.
Pump does not run	Timer is switched off.	Turn the required timer on.
	Current time is outside the timer period.	Check the timer start and end times.
	System clock or time zone is incorrect.	Check Settings > Date & Time.
	Filter Pump is not allocated to the timer.	Allocate Filter Pump to the required timer.
	Pump Control is set to Force Off.	Open Mode and set Pump Control to Auto.
	Pump is not connected or configured correctly.	Check pump connection, pump setup and wiring.
	Variable-speed pump is not accepting external control.	Check pump model selection, RS485 or relay wiring, and external control settings.
Chlorination does not start	Sanitise is not allocated to an active timer or mode.	Allocate Sanitise to the required timer, or check Spa Mode operation.
	Pump is not running.	Confirm the pump is running.
	Water flow is not detected.	Confirm the Water Present icon shows water present.
	Chlorine output is set too low.	Increase the chlorine output percentage if required.
	ORP control is enabled and ORP is above the setpoint.	Check the current ORP reading and ORP setpoint.
	Cell is scaled, dirty or disconnected.	Inspect and clean the cell. Confirm both cell connectors and the cell data cable are connected.
Low free chlorine	Chlorine output is set too low.	Increase the chlorine output percentage.
	Timer runtime is too short.	Increase the daily timer runtime if required.
	Sanitise is not allocated for enough operating time.	Check timer allocation and confirm Sanitise is selected where chlorination is required.
	Water flow is not detected for part of the timer period.	Check pump operation, pump speed and water flow detection.
	Salt or mineral level is too low.	Test salt or mineral level manually and adjust if required.
	Cell is scaled or dirty.	Inspect and clean the cell if calcium build-up is visible.
	Stabiliser is too low.	Test cyanuric acid / stabiliser and adjust if required.
	Heavy pool use, rain or organic contamination has increased chlorine demand.	Use Superchlorinate if a temporary chlorine boost is required.
High free chlorine	Chlorine output is set too high.	Reduce the chlorine output percentage.

	Timer runtime is too long.	Reduce timer runtime if required.
	ORP setpoint is too high.	If ORP control is enabled, reduce the ORP setpoint only after confirming pH and stabiliser are correct.
	Superchlorinate has recently been used.	Allow chlorine level to reduce and use Superchlorinate only when required.
Salinity Level Low	Salt or mineral level is below the required range.	Test salt or mineral level manually before adding salt.
	Pool has been diluted by rain, backwashing or topping up.	Add salt or minerals only if manual testing confirms the level is low.
	Salt has not fully dissolved or circulated.	Allow the pool to circulate and retest.
	Cell is scaled or dirty.	Inspect and clean the cell if required.
pH is high	Normal pH rise from salt or mineral chlorination.	Test pH regularly and adjust as required.
	Total alkalinity is too high.	Test and adjust total alkalinity before making large pH corrections.
	Acid dosing is not enabled or not dosing enough.	Check Acid Mode, dose interval and dose amount.
	Acid drum is empty or acid line is not primed.	Check acid level and prime the acid line using Prime/Manual Dose.
	Acid Pump is not allocated to an active timer.	Allocate Acid Pump to the required timer.
	pH probe reading is inaccurate.	Check the pH reading against a pool water test and calibrate the pH probe if required.
Acid dosing does not operate	Diamond Dose is not connected.	Confirm Diamond Dose is connected.
	Acid Mode is set to OFF.	Select the required Acid Mode.
	Acid Pump is not allocated to an active timer.	Allocate Acid Pump to the required timer.
	Pump is not running or water flow is not detected.	Confirm the pump is running and water is detected.
	Acid drum is empty.	Check the acid drum level.
	Acid line is not primed.	Prime the acid line using Prime/Manual Dose.
	Tubing is kinked, blocked, leaking or worn.	Check tubing, suction strainer and fittings.
	In Auto mode, measured pH is at or below the setpoint.	No dose is required unless measured pH rises above the target setpoint.
pH reading appears incorrect	Pool water has not circulated before testing.	Run the pump for at least 20 minutes before taking a sample.
	pH probe does not match pool water test.	Use pH Calibration Water Sample if calibration is required.
	Incorrect calibration value was entered.	Use pH Calibration Factory Reset and retest.
	Probe is dirty, aged or damaged.	Inspect the probe and contact a pool professional if the reading remains unstable.
ORP reading is low but free chlorine tests correctly	pH is too high.	Correct pH before adjusting the ORP setpoint.
	Cyanuric acid / stabiliser is high.	Test stabiliser and reduce if required.
	Salt or mineral level is high.	Confirm salt or mineral level is within range.
	ORP probe is new, recently cleaned or not stabilised.	Allow 24-72 hours of normal circulation before fine adjustment.

	Cell is dirty or scaled.	Inspect and clean the cell if required.
ORP control does not operate	Auto (ORP Probe) is not enabled.	Enable Auto (ORP Probe).
	ORP probe is not installed or connected.	Confirm the ORP probe is installed and connected.
	Pump is not running or water flow is not detected.	Confirm the pump is running and water is detected.
	Sanitise is not allocated to the active timer or mode.	Allocate Sanitise where chlorination is required.
	pH is outside the recommended range.	Correct pH before adjusting ORP settings.
Timer does not run	Date, time or time zone is incorrect.	Check Settings > Date & Time.
	Timer toggle is off.	Turn the timer on.
	Current time is outside the timer period.	Check the programmed timer period.
	Required equipment is not allocated.	Open the timer and select Allocate Equipment.
	Pump Control is not set to Auto.	Open Mode and set Pump Control to Auto.
Favourite does not run expected equipment	Favourite toggle is off.	Turn the favourite on.
	Wrong favourite is selected or configured.	Check the favourite name and allocated equipment.
	Equipment is not allocated to the favourite.	Select the gear icon and allocate the required equipment.
	Favourite runtime has expired.	Restart the favourite or adjust the runtime.
	Spa Mode is suppressing equipment marked Clean.	Check whether Spa Mode is active and whether the equipment is marked Clean.
Spa Mode does not operate as expected	Spa Mode is not included in the favourite.	Add Spa Mode to the spa favourite.
	Spa favourite is not active.	Turn on the spa favourite.
	Additional required valves are not allocated.	Add the required Diamond Hub valve outputs to the spa favourite.
	Heater or spa lights are not allocated.	Add required spa equipment to the spa favourite.
	Equipment marked Clean is being prevented from operating.	This is normal during Spa Mode. Check equipment Clean settings if required.
Light does not turn on or change colour	Light output is not configured as Lighting.	Check Advanced Settings > Equipment.
	Wrong lighting type is selected.	Select the lighting type that matches the installed pool light.
	Light is not allocated to the active timer or favourite.	Allocate the light output to the required timer or favourite.
	Light is not powered or there is a short delay after toggling.	Confirm the light has power and wait briefly after changing colour.
Network or update check fails	Wi-Fi signal is weak.	Improve Wi-Fi coverage near the equipment area.
	Wi-Fi password is incorrect.	Re-enter the Wi-Fi password.
	Ethernet cable or router connection is not active.	Check the Ethernet cable and router connection.
	Router has no internet access.	Confirm internet access from the router.
	System has not yet established internet access.	Wait a few minutes and try System Updates again.
Display or timer issues	System time or time zone is incorrect.	Check Settings > Date & Time.
	Network time is disabled or unavailable.	Enable Use Network Time where available, or set the time manually.

	LCD brightness is too low or auto turn-off is enabled.	Check LCD brightness and automatic turn-off settings.
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When to Contact Support

Contact your pool professional or support provider if:

- An error remains after the recommended checks.
- The pump does not respond to **Force On** or **Auto**.
- Water flow cannot be confirmed.
- Chlorination does not operate when all required conditions are met.
- Acid dosing does not operate after checking setup and priming.
- Probe readings remain unstable after calibration or stabilisation.
- Valve movement, Spa Mode operation or equipment wiring appears incorrect.
- Electrical equipment, wiring, plugs or connectors appear damaged.

Specifications

The table below lists the key specifications for each BWT DIAMOND MINERALISER model, including chlorine output, power requirements, dimensions, and weight.

Use this information when selecting a model, checking installation requirements, or confirming electrical and mounting details.

Diamond Mineraliser Specifications

Model No.	MIN15	MIN20	MIN25	MIN30	MIN35	MIN50	MIN75	MIN100
Voltage AC Input	240	240	240	240	240	240	240	240
Amps AC Input	0.5	0.6	0.7	1.0	1.1	1.35	1.5	1.95
Voltage DC Out	8	8	8	8	8	11	12	16
Amps DC Out	8.5	11	13.5	15.7	18.5	17	17.5	18
Chlorine Grams/Hr	15	20	25	30	35	50	75	100
Power (Watts)	86	124	140	153	185	265	360	433
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Weight (KG)	10.45	10.52	10.60	10.70	10.80	12.60	15.50	15.80
Dimension (CM)	39.8H 27W 17.1D	39.8H 27W 17.1D	39.8H 27W 17.1D	39.8H 27W 17.1D	39.8H 27W 17.1D	39.8H 27W 17.1D	39.8H 27W 17.1D	39.8H 27W 17.1D

Diamond Hub Specifications

Voltage AC Input	240
Amps AC Input	0.5
Outlets: 9.5A Total MAX Current	9.5
Weight (KG)	3.6
Dimension (CM)	14.1H 29.1W 11.6D

Diamond Dose Specifications

Weight (KG)	0.6
Dimension (CM)	14.1H 29.1W 11.6D

FAQ

What does the Water Present icon mean?

The Water Present icon shows whether the Mineraliser is detecting water in the cell housing.

Chlorination and acid dosing only operate when the required equipment is running and water is detected.

If the pump is running but water is not detected, check the pool water level, pump prime, valve position, filter condition and cell housing flow direction.

Why is chlorination not running?

Chlorination only runs when the required conditions are met.

Check that:

- The pump is running.
- Water is detected.
- **Sanitise** is allocated to an active timer or mode.
- The chlorine output is set above zero.
- The system is not in a mode that prevents chlorination.
- The salt or mineral level is within range.
- The cell is clean and connected.

If ORP control is enabled, chlorination may stop when the ORP reading reaches the selected setpoint.

Why is my free chlorine low?

Low free chlorine can be caused by low chlorination output, short timer runtime, low salt or mineral level, a dirty cell, low stabiliser, heavy pool use, rain or organic contamination.

Test the pool water manually before making changes.

If required, increase the chlorine output, increase timer runtime, clean the cell, adjust stabiliser or use **Superchlorinate** for a temporary chlorine boost.

Why is my free chlorine high?

High free chlorine can be caused by chlorination output being set too high, long timer runtime, low chlorine demand, or recent use of **Superchlorinate**.

Test the pool water manually before making changes. If required, reduce chlorine output or reduce timer runtime.

If ORP control is enabled, check pH and stabiliser before adjusting the ORP setpoint.

Why is ORP low when free chlorine tests correctly?

ORP is affected by more than the free chlorine level. High pH, high cyanuric acid / stabiliser, salt or mineral

level, temperature, organic load and probe condition can all affect the ORP reading.

If free chlorine tests correctly but ORP appears low, check pH first. High pH reduces chlorine effectiveness and can lower ORP.

Also check stabiliser level and allow new or recently cleaned ORP probes time to stabilise before making fine setpoint adjustments.

Should I adjust ORP to match a specific number?

No. Do not chase a specific ORP number without checking the pool water manually.

The correct ORP setpoint is the value that maintains the desired free chlorine level in that pool, with pH and stabiliser kept within the recommended range.

Why does pH rise in a salt or mineral pool?

Salt and mineral chlorination systems commonly cause pH to rise over time.

Check pH and total alkalinity regularly. If Diamond Dose is installed, acid dosing can help manage pH, but manual water testing is still required.

Why is acid dosing not operating?

Acid dosing only operates when the required conditions are met.

Check that:

- Diamond Dose is connected.
- Acid Mode is not set to **OFF**.
- **Acid Pump** is allocated to an active timer.
- The pump is running.
- Water is detected.
- The acid drum is not empty.
- The acid line is primed.
- The tubing is not kinked, blocked or worn.

In Auto pH mode, acid will not dose if the measured pH is at or below the target setpoint.

How do I calibrate the pH probe?

Use **pH Calibration Water Sample** to align the pH reading with a reliable pool water test result.

Where possible, use a pool shop test result. If using an on-site test kit, use a clean sample and a reliable test method.

Run the pump for at least 20 minutes before taking the sample.

If an incorrect calibration value has been entered, use **pH Calibration Factory Reset** and retest the water before relying on Auto pH dosing.

Can I calibrate the ORP probe?

ORP calibration is not part of normal user setup in this manual.

If the ORP reading does not appear correct, first check pH, free chlorine, stabiliser, salt or mineral level, circulation, probe condition and stabilisation time.

New or recently cleaned ORP probes may take 24–72 hours of normal circulation to stabilise.

What does Spa Mode do?

Spa Mode switches the system into spa operation where the pool and spa share equipment.

When Spa Mode is active:

- The system uses the spa temperature setpoint.
- The Filter Pump is included automatically.
- **Sanitise** is included automatically at 10% chlorination output.
- The two dedicated Spa Valve Actuator outputs on the Mineraliser control unit are activated.
- Equipment marked **Clean** is prevented from operating.
- Acid dosing is automatically disabled.

Additional spa valves or outputs can be added to the spa favourite where a Diamond Hub is used.

What are Favourites?

Favourites allow common equipment combinations to be turned on quickly from the Mineraliser screen or from the phone app.

A favourite can be used for spa operation, pool lights, water features, heating, cleaning equipment, night swimming or entertaining.

Each favourite stores its name, allocated equipment and last selected runtime.

What does Run continuously mean?

If the favourite runtime is reduced to zero, the time display changes to dashes. This means **Run continuously**.

A favourite set to **Run continuously** stays active until the user turns it off.

Can more than one Favourite run at the same time?

Yes. More than one favourite can be active at the same time.

If the same equipment is used by more than one active timer, favourite or mode, that equipment remains on until it is no longer required by any active function.

Why did equipment stay on after I turned a Favourite off?

Turning off one favourite only releases the equipment used by that favourite.

If the same equipment is still required by another active timer, favourite, Spa Mode or system function, it will continue running.

Why is my timer not running?

Check that:

- The system date, time and time zone are correct.
- The timer is switched on.
- The current time is inside the timer period.
- The timer has a valid start and end time.
- The required equipment is allocated.
- Pump Control is set to **Auto** for normal operation.

When should I use Superchlorinate?

Use **Superchlorinate** when a temporary chlorine boost is required, such as after heavy pool use, heavy rain, cloudy water or a low chlorine test result.

Superchlorinate runs chlorination at 100% output for 24 hours, provided the pump is running and water is detected.

Use it only when required. Extended or unnecessary use may reduce cell life.

What does Factory Reset clear?

Factory Reset returns the Mineraliser configuration to its default shipped state.

It clears configuration settings including renamed equipment, equipment output settings, timers, favourites, pump setup, acid dosing settings, ORP control settings, pH calibration settings, Diamond Hub configuration and numbering, other user-adjustable system settings and Wi-Fi details.

After a factory reset, the system must be set up again before normal automatic operation can resume.

What should I do if an alert icon is shown?

Check the touchscreen for the active warning or error message.

A yellow ! indicates a warning. A red ! indicates an error.

Follow the recommended action shown on the touchscreen or refer to the Troubleshooting section.

When should I contact support?

Contact your pool professional or support provider if:

- An error remains after the recommended checks.
- The pump does not respond to **Force On** or **Auto**.
- Water flow cannot be confirmed.
- Chlorination does not operate when all required conditions are met.
- Acid dosing does not operate after checking setup and priming.

- Probe readings remain unstable after calibration or stabilisation.
- Valve movement, Spa Mode operation or equipment wiring appears incorrect.
- Electrical equipment, wiring, plugs or connectors appear damaged.

Support

If you need assistance with the Mineraliser, contact your pool professional, installer or support provider.

Before contacting support, have the following information ready:

- Product model.
- Chlorinator size.
- Serial number, where available.
- Current software version.
- Description of the issue.
- Any warning or error message shown on the touchscreen.
- Current pool water test results.
- Salt or mineral level.
- pH level.
- Free chlorine level.
- ORP reading, where ORP control is installed.
- Photos of the installation, where relevant.

To find system information:

1. Open the side menu.
2. Select **Settings**.
3. Select **System Information**.
4. Record the software version and any system identification details shown.

If the issue relates to Wi-Fi, software updates or app pairing, also confirm:

- The Wi-Fi network name.
- Whether the Mineraliser is connected by Wi-Fi or Ethernet.
- Whether the network has internet access.
- The result shown on the **System Updates** screen.

If the issue relates to pump operation, acid dosing, ORP control, Spa Mode or connected equipment, the installer may need to inspect the system configuration, wiring, plumbing and equipment setup.

Do not open the control unit or modify wiring unless you are a qualified service person.