



 **Clear™**  
POOL WATER SYSTEM  
MODELS BC15 | BC25 | BC35 | BC45

Instruction Manual



## Thanks for choosing the Brauer Swim B-Clear Salt and Mineral Pool System!

Built for exceptional performance and long-lasting reliability, this Pool System is designed to make pool care easy and effective. Follow the steps in this manual to get the best from your system, with essential tips and troubleshooting advice included to keep things running smoothly.

If you ever need assistance, just reach out to your Brauer Swim Certified Partner or visit our website for support. Enjoy a fresher, cleaner pool experience with Brauer Swim!

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# 1. Important Warnings & Safety Instructions

**READ AND FOLLOW ALL INSTRUCTIONS. IMPORTANT SAFETY INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.**



## 1.1 Important Warnings

This manual contains valuable information about the installation, operation, and safe use of this product. It should be given to the equipment's owner and/or operator. Basic safety precautions should always be followed when installing and using this electrical equipment. Failure to follow safety warnings and instructions in this manual can result in severe injury and/or damage to your equipment. Read and follow all warning notices and instructions included in this manual.

The Power Supply internally contains live components, which can cause an electric shock if opened. If the power cord is damaged, it should be replaced by the manufacturer, their authorised agent, or a similarly qualified party.



## 1.2 Important Safety Instructions

To reduce the risk of injury, young children should not be permitted to use this product unless they have been trained by the person responsible for their safety and acknowledge their ability to use such equipment. Service on the system should only be performed by your local pool Professional to reduce the risk of accidents or incidents.

## 1.3 General Warnings



When mixing acid with water, **ALWAYS ADD THE ACID TO WATER. NEVER ADD WATER TO ACID.**



**DO NOT PLUG THE CONTROL UNIT IN IF THE CARTON HAS BEEN WET.**



**GAS BUILDUP CAN OCCUR WITH IMPROPER WIRING:** To reduce the risk of personal injury, the Control Unit is designed so that the Electrolytic Cell will only receive power when the pool pump is on. Otherwise, dangerous chlorine gas build-up can occur. If the pump is not installed to the AC Socket (pump outlet) on the Control Unit, then the installer must ensure that the Electrolytic Cell is never energised when the pool pump is OFF, or water is not flowing through the system.

# 2. General Overview

## Overview

### CONTROL UNIT



### CELL HOUSING

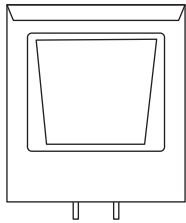


## 2.1 Recommendations and Helpful Hints

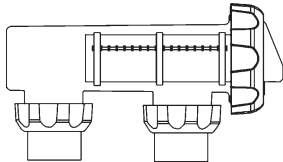
- Read and keep your manual in a safe place.
- Increase chlorine production when the temperature goes up.
- Use Stabiliser to stabilise chlorine in the swimming pool.
- For optimum performance, maintain your salt or mineral levels between 3000-4000 ppm (3500 ppm ideal).
- Decrease production when the temperature decreases.

## 2. General Overview

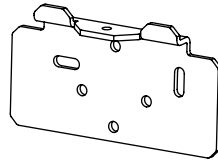
### 2.2 Contents



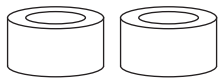
Control Unit



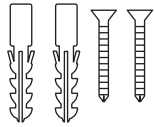
Cell Housing with Unions



Wall Mounting Bracket with Level



2 x 50/40 Reducing Bushes

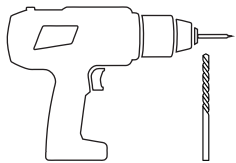


2 x Green Wall Plugs with Screws

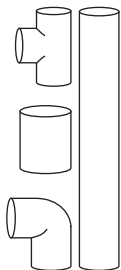


Installation and Operating Manual

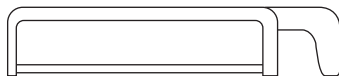
### 2.3 Tools Needed



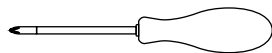
Drill with 6mm Bit



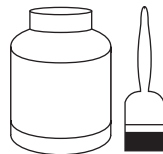
Basic PVC Fittings



Hacksaw



No.2 Philips Head Screwdriver



PVC Primer and Glue

## 3. Pool Preparation

### Before operating your B-CLEAR Pool System, please read the following:



Check the salt or mineral levels in your pool before starting your system. **Refer to Section 7.4 to perform a SALT test.**

Salt or mineral levels should ideally be 3000-4000 ppm (3500 ppm ideal) no more than 4500 ppm. You may need to add 20-30% more product to the pool water to achieve this TDS with minerals. Contact your local pool professional for further assistance.

Salt or mineral levels above 6000 ppm may overload the system, cause excessive heat, and void your warranty.

For all new pool installations, please seek advice from your pool builder or your local pool professional before adding salt or minerals, as some new surfaces require that no salt or minerals be added when initially completed.

**NEVER ADD SALT OR MINERALS DIRECTLY TO THE SKIMMER BOX.** The high concentration of either salt or minerals will pass through your filtration, pump, and other pool components.

### Handy Tips



The colder the water, the lower your output, but this does not mean you need more salt. There will always be less chlorine demand in colder water.

We recommend adding 3.5kg of ultrafine pool salt per 1000 litres of pool water. A 50,000-litre new pool needs approximately 175 kilograms of Ultrafine salt. Check the directions for other mineral products and follow the manufacturer's instructions.

The system can operate on other mineral/magnesium chloride salts, and you should allow an extra 20-30% of the product to achieve the correct TDS for these types of salts.

Salt or Minerals should always be added to the pool's shallow end and allowed to dissolve. Do not let the salt or minerals settle on the pool floor, as it may damage the surface. Use your pool brush to mix the salt or minerals into the water.

Running the pump will mix the water and help the salt or minerals to dissolve.

Run the pump only in the first 8-12 hours (ensure the cell is switched off) to allow the salt or minerals to dissolve.

By accessing the salt test menu, a measurement is taken, and a total TDS reading is displayed. The ideal TDS reading should be an LCD display of "OK", approximately 3000 - 4000 ppm. If "HIGH" is displayed, the salt level is above 4500 ppm, and the salt level is too high, and if "LOW" is displayed, the salt is below 1500 ppm.

We suggest taking a sample to your local pool Professional for a more accurate result and further assistance.

## 4. Control Unit and Cell Installation



### 4.1 Control Unit Installation

The Control Unit has an IP34 Ingress Protection Rating, enabling it to be installed outdoors. Regulations require that the Control Unit be installed outside the pool zone. The Control Unit shall be installed according to AS/NZS 3000 wiring rules.

The Control Unit should be installed in a well-ventilated position, ideally away from sunlight and rain, to prolong life and at least 1 meter above ground to prevent run-off water entry.

Ensure the Control Unit is not stored near chemicals or fertilisers or in a closed, unventilated shed with related products. The fumes will cause excessive corrosion and damage to the internals of the Control Unit and may void the warranty.

When mounting the Control Unit on a post, a flat panel of at least the same size should be installed to function as a waterproof backing plate.

Mount the Control Unit with the Mounting Bracket, Green Plugs, and Screws provided.

The Control Unit should be mounted no further than 1.5 metres from the Pool System Cell for easy operation.



### 4.2 Cell Electrode Installation

Connect the Cell Housing horizontally in the return line to the pool using high-pressure PVC glue (use reducing bushes supplied if 40mm PVC pipe is installed). The Cell Housing can be mounted vertically, but provision must be made for a gas trap.

The direction of water flow through the Cell Housing is not critical, although we recommend entering from the closed end and exiting from the end closest to the Cell Locking Ring. This will cause less water hammer on the cell plates over time.

Check that the O-ring is clean, greased with silicone grease (**DO NOT** use petroleum-based jelly), and securely located in the Cell Housing.

Ensure the Cell Locking Ring is firmly tightened by hand (**DO NOT** use a tool to tighten it).

Connect the cell lead from the Control Unit to the Cell Cap, ensuring a firm fitment to prevent water entry.

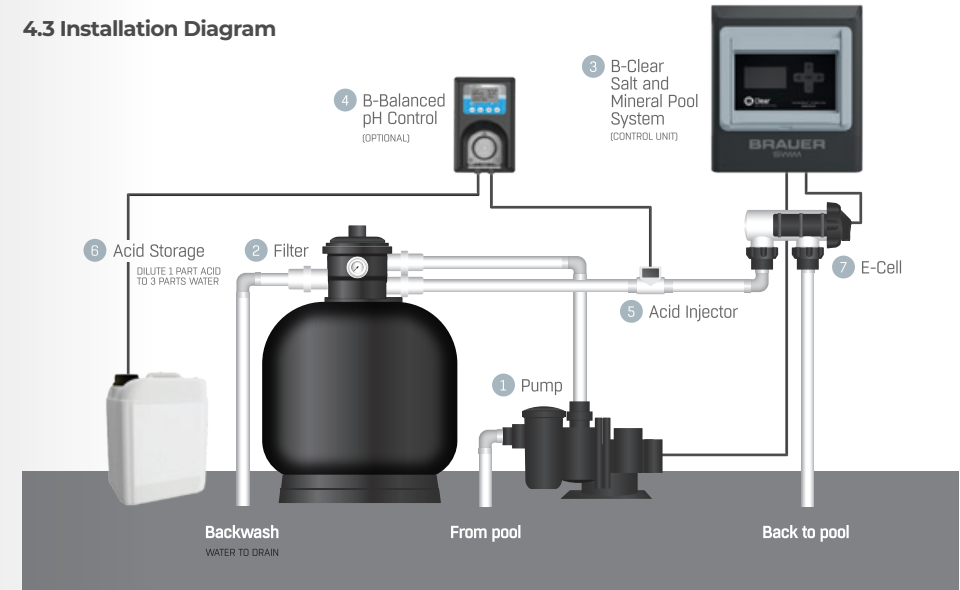
The cell comes pre-packaged with a Velcro harness for transit and packaging purposes. After installation, ensure the cable hangs freely and is not secured using the Velcro harness or any other fastening device to prevent heat buildup and potential damage to the cable.

Plug the Control Unit 3-pin plug into a suitable weatherproof RCD-protected 10amp outlet.

Plug the pump into the 3-pin AC Socket at the bottom of the Control Unit.

## 4. Control Unit and Cell Installation

### 4.3 Installation Diagram



### Important Notes

**The pump rating must not exceed 8amps.**

**Saltwater may damage electrical components in the Control Unit.**

#### WARNING:

We **DO NOT** recommend using valves on the inlet or outlet of the cell housing. If you use a valve, it is essential to ensure it cannot deadhead (lock closed) while the pump is running. It is the installer's responsibility to ensure that some form of flow control is installed in this instance and that it disables the pump.

**ALWAYS** ensure that pipework and equipment do not allow gases generated from the cell to collect and build up in any part of the installation.

It is **RECOMMENDED** that the Cell Housing be installed horizontally to create a natural gas trap that acts as a safety device. Installation in any other way may cause explosion, injury, or death if the installer does not allow for gas removal. A venturi pipe is installed/moulded within the Cell Housing design to eliminate any gas buildup, although it is always recommended to ensure proper installation to prevent this from happening. If installing vertically, please install as per the diagram below.

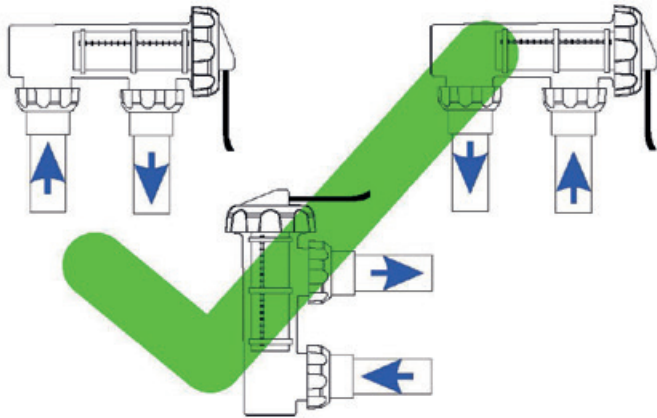
The Cell Housing must be installed in the **RETURN** pipework to the pool. It must always be installed after the filter, gas heater, solar heating, heat pump or B-Balanced pH Controller.

**DO NOT** apply priming fluid to the cell Housing. It is not needed and may react with the plastic.

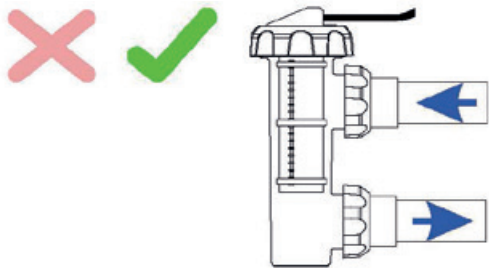
## 4. Control Unit and Cell Installation

### 4.4 Cell Installation Methods

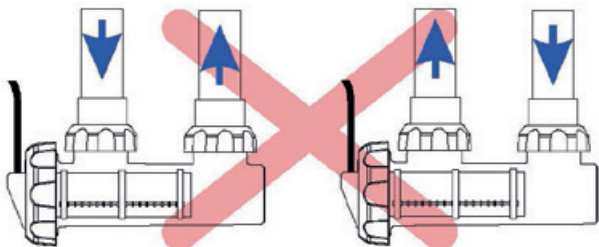
Any of these methods can allow for a natural gas trap and allow the water sensor on the cell cap to work.



This installation below could work if the water flow keeps the housing filled at all times. This is highly unlikely with low speed energy efficient pumps.



**NONE OF THESE INSTALLS BELOW WILL WORK:**



NEVER UPSIDE DOWN LIKE THESE TWO (no matter the flow)

## 4. Control Unit and Cell Installation

### CONTROL UNIT OPERATION

#### 4.5 Power Switch

This switch position determines whether the power is turned ON or OFF when supplied from the AC Socket.

#### 4.5.1 Cell Electrode Installation

- Pressing the switch in at the "O" position turns the system OFF in all models.
- I Pressing the switch in at the "I" position turns the Power ON in all models.

#### 4.5.2 Circuit Breaker

The Circuit Breaker only operates the Cell circuit and not the pump circuit. A circuit breaker is an automatically operated electrical switch designed to protect an electrical circuit from damage caused by overcurrent, overload, or short circuit. It can be reset by pressing the button in after it has tripped. It may be damaged if you supply excessively high salt levels through the cell.

#### 4.5.3 AC Socket (Pump Outlet)

The AC Socket allows the pump to be electrically operated and controlled by the Control Unit. **WARNING:** If you fail to control the pump this way, you must install a flow switch mechanism to control the electrical supply to the Control Unit. This will prevent gas build-up if the pump stops or a valve is closed.

#### 4.5.4 Cell Lead

The proprietary Cell Lead comes complete with moulded gold plated/brass connectors and is connected to the cell via a watertight plug top.

#### 4.5.5 Start-Up Procedure

- Plug the Control Unit 3-pin plug into a suitable weatherproof RCD-protected 10amp outlet and then plug the pump into the socket at the base of the Control Unit.
- Ensure the cell is connected and the cell cable is inserted fully into the connections on the cell cap.
- Turn the 10-amp wall outlet supply switch to "ON".
- Ensure the Power Switch is turned ON.

## 5. Initial Start-Up of your Control Unit

### 5.1 Initial Start-up

The screen to the right will appear when your Control Unit starts up.

### 5.2 Start-up Set Clock

START UP SET CLOCK allows you to program the exact time of the day. HH digits will flash, and pressing [+] will increase the time, and pressing [-] will decrease the time.

Pressing [OK] saves the selected hour HH.

MM digits will flash and pressing [+] will increase the time and pressing [-] will decrease the time.

Pressing [OK] saves the selected hour HH and MM.

Pressing [<] returns you to the previous menu screen.

### 5.3 Start-up Run Period

START-UP RUN PERIOD allows you to program your daily filter running times. 2 CYCLES/DAY will flash and pressing [+] or [-] will change the selection. PERIODS of running.

1. 2 CYCLES/DAY—The system runs from 6 a.m. to 10 a.m. and 4 p.m. to 8 p.m.
2. 1 CYCLE AM - The system runs from 8 am to 4 pm.
3. 1 CYCLE PM - System runs from 8 pm to 4 am.

Pressing [OK] saves the selected PERIOD

Pressing [<] returns the display to the previous menu screen.

### 5.4 Start-up Information

START-UP INFORMATION allows you to customise the system to your pool size.

Pressing [+] or [-] will change it in 1,000-litre increments.

Holding the [+] or [-] in will change pool size in 5,000-litre increments.

A reading of 40,000lt or similar flashes to show volume can be changed. Pressing [OK] confirms your selection. If you do not know your pool size, you can press [OK] and set this later or contact your local pool Professional for further assistance.

Pressing [<] returns you to the previous menu screen.

EMBEDDED SOFTWARE  
<VER CLxx.xx>  
CHECKING SYSTEM  
MODEL: 25g/hr

START UP SET CLOCK  
ACTUAL TIME: HH:MM  
[+] or [-] to change  
[OK] SAVE

START UP SET CLOCK  
ACTUAL TIME: HH:MM  
[+] or [-] to change  
[OK] SAVE [<] RETURN

START UP FILTER TIME  
PERIOD: 2 CYCLES/DAY  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] RETURN

START UP INFORMATION  
POOL SIZE: 40,000lt  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] RETURN

## 5. Initial Start-Up of your Control Unit

### 5.5 Default Display Screen

The DEFAULT DISPLAY SCREEN (DDS) displays the screen to the right. This is the system's actual output percentage.

Pressing [+] or [-] will increase the Output setting, and the screen will change, as seen on the right. This should always remain at 100% unless SPA MODE (see section 7.7.9) has been selected.

The (•) symbol indicates regular operation.

T1 and T2 indicate that the system operates in the First and Second Filter Cycles of the day, respectively.

The Mode shows AUTO, which can be changed to ON, OFF, or AUTO in the Power/Mode Menu (**see 7.7.1 MODE SETTING**).

The time shows as HH: MM in 24-hour clock format.

The cell status is shown as FWD when the cell moves forward and REV when it moves in the opposite direction.

The pump AC socket status is displayed, either ON or OFF.

Any power failures return you to the DDS screen; the last saved MODE is active.

#### Please note:

**To extend the life of the LCD display, the display will become dim after 10 minutes of inactivity. Any time you press the keypad, the LCD will become bright again and automatically dim once any activity has stopped after 10 minutes.**

OUTPUT: 100% (•) T1  
MODE: AUTO HH:MM  
CELL: FWD PUMP: ON  
[OK] ENTER MENU

## 6. Control Panel Operation

### 6.1 OK BUTTON

Menus are entered by pressing the [OK] button.

Any inactivity in any display for longer than 60 seconds results in the display returning to the DDS screen.

MAIN MENU allows you to enter all MENU's

Pressing [+] takes you to the last menu, and using the [-] or [OK] enters the first three menus.

Pressing [<] returns you to the previous menu screen.

Pressing [+] or [-] scrolls up or down, and [OK] enters the flashing menu.

Below are the available menus in the Control Unit.

See Section 7 for the workings of all menus.

|   |                  |
|---|------------------|
| 1 | Filter Times     |
| 2 | Extra Pump Times |
| 3 | Chlor Output     |
| 4 | Salt Test        |
| 5 | Chlor Boost      |
| 6 | Backwash         |
| 7 | Service Menu     |

Note: Special access keys also allow you to enter menu functions, which are detailed in each section.

MAIN MENU  
SIMPLY USE BUTTONS  
[+] OR [-] TO CHANGE  
[OK] ENTER [-<] EXIT

OUTPUT: 100% (•) TI  
MODE: AUTO HH:MM  
CELL: FWD PUMP: ON  
[OK] ENTER MENU

1 FILTER TIMES  
2 EXTRA PUMP TIMES  
3 CHLOR OUTPUT  
[+]UP[-]DN[OK] ENTER

5 CHLOR BOOST  
6 BACKWASH  
7 SERVICE MENU  
[+]UP[-]DN[OK] ENTER

## 7. Control Unit Menu Guide

### 7.1 Filter Times

#### Summer Settings

Ideally, run for 4 hours in the morning (6 am – 10 am) and 4 hours in the evening (4 pm – 8 pm). For a smaller pool, you can run for fewer hours. Running the system for more extended hours may be necessary in extreme weather. Contact your local pool Professional for further assistance.



**Winter Settings** – Reduce filter times as per your personal requirements.

Entering the Filter Times menu from the main menu displays the screen to the right.

Pressing [+] then changes the timer to a Single Timer Cycle (T1).

Pressing [OK] accepts the selected cycle and enters the Timer Program.

Pressing [+] changes back to Dual Timer Cycle (T2).

Pressing [OK] accepts the selected cycle and enters the Timer Program.

#### TIMER 1: ON TIME (HH)

HH digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected hour HH.

Pressing [<] returns you to the previous display.

#### TIMER 1: ON TIME (MM)

MM digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected minute MM.

Pressing [<] returns you to the previous display.

#### TIMER 1: OFF TIME (HH)

HH digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected hour HH.

Pressing [<] returns you to the previous display.

#### TIMER 1: OFF TIME (MM)

MM digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected minute MM.

Pressing [<] returns you to the previous display.

#### TIMER 2: ON TIME (HH)

HH digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected hour HH.

Pressing [<] returns you to the previous display.

#### TIMER 2: ON TIME (MM)

MM digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected minute MM.

Pressing [<] returns you to the previous display.

#### TIMER 2: OFF TIME (HH)

HH digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected hour HH.

Pressing [<] returns you to the previous display.

#### TIMER 2: OFF TIME (MM)

MM digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected minute MM.

Pressing [<] returns you to the previous display.

HH:MM - DUAL CYCLE  
[+] TO CHANGE CYCLE  
[OK] CONFIRMS CYCLE  
[-<] BACK

HH:MM - SINGLE CYCLE  
[+] TO CHANGE CYCLE  
[OK] CONFIRMS CYCLE  
[-<] BACK

TIMER 1: ON TIME  
START TIME: HH:MM  
[+] or [-] TO CHANGE CYCLE  
[OK] SAVE [-<] RETURN

TIMER 1: OFF TIME  
STOP TIME: HH:MM  
[+] or [-] TO CHANGE CYCLE  
[OK] SAVE [-<] RETURN

TIMER 2: ON TIME  
START TIME: HH:MM  
[+] or [-] TO CHANGE CYCLE  
[OK] SAVE [-<] RETURN

TIMER 2: OFF TIME  
STOP TIME: HH:MM  
[+] or [-] TO CHANGE CYCLE  
[OK] SAVE [-<] RETURN

## 7. Control Unit Menu Guide

Sunlight and higher bather load in summer dissipate more chlorine than in winter.

You must regularly check your chlorine reading and adjust your settings as needed.

**To run the Pool System in MANUAL ON (i.e., always ON), set the Mode Setting to ON and the T1 & T2 ON & OFF Times to 00:00; alternatively, use the External Control Mode, Service Menu 7, Sub Menu 5.**

### 7.2 Extra Pump Times

To access the Extra PUMP RUN TIMES, scroll through the MAIN MENU using the [+] or [-] buttons until you reach menu 2, EXTRA PUMP TIMES.

Press [OK] to enter the display on the right. This allows you to set a single pump run event [1. PUMP SINGLE RUN] or a permanent additional pump running time [2. PUMP ON TIMERS]. Use the [+] or [-] buttons to select the function required and press [OK] to enter or [-] to return to the previous menu.

Alternatively, if you wish to add only a single pump run time, you can do this by pressing and holding the [-] button for more than three seconds, this will take you directly to the single pump run.

#### Pump Single Run

This setting circulates water in the pool without the B-Clear Pool System producing chlorine. Service technicians mostly use this when adding salt to the pool or if additional filter time is needed after a pool service.

Pressing [OK] on the display above [1. PUMP SINGLE RUN] takes you to the display shown to the right. This message makes you aware that the cell does not work during this time. Press [OK] to ENTER the PUMP SINGLE RUN, and pressing [-] allows you to exit and return to the previous display.

Pressing [OK] on the PUMP SINGLE RUN menu takes you to the display shown to the right. The [+] or [-] allows you to adjust the PUMP RUN TIME from 1 to 72 hours in one-hour increments. The default run time is 8 hours.

Once the time is set, press [OK] to START the pump, which takes you to the following display. Pressing [-] allows you to exit and return to the service menu without saving any changes.

**NOTE: The cell will be off during this time even if T1 and T2 times call for it to be ON.**

The Pool System will then count down the remaining pump run time. You can pause the operation by pressing [OK] or stop it by pressing [-]. Once the time has finished, the unit will return to its last operating mode.

#### Pump On Timers

This is typically used if you have a heat pump or energy-efficient pump and need to run the pump for longer hours than the cell.

Pressing [OK] on display [2. PUMP ON TIMERS] takes you to the display shown to the right.

**NOTE: The pump will run outside of T1 and T2 times, and the cell will be OFF when outside of these times. Overlapping P1/P2 and T1/T2 times means the pump will be ON for all P1/P2 times, and the cell will only be ON for the T1/T2 times.**

PUMP RUN TIME  
1. PUMP SINGLE RUN  
2. PUMP ON TIMERS  
[+] UP [-] [OK] ENTER

PUMP SINGLE TIME  
NOTE: Cell is not ON  
during this time  
[OK] ENTER [-] RETURN

PUMP SINGLE TIME  
SETTING: 08:00:00hrs  
[+] UP [-] TO CHANGE  
[OK] START [-] RETURN

PUMP RUN TIME LEFT  
TIME LEFT: 08:00:00hrs  
[+] or [-] TO CHANGE  
[OK] PAUSE [-] STOP

PUMP ON TIMERS  
This runs PUMP only  
outside T1, T2 Times  
[OK] ENTER [-] RETURN

## 7. System Menu Guide

Pressing [OK] on the above display will enter the [PUMP P1: ON TIMER] display on the right. The HH digits flash, pressing [+] increases the time, and [-] decreases the time. Pressing [-] allows you to return to the previous menu without saving any changes.

Pressing [OK] accepts the selected hour HH and takes you to the following display to set the minutes required. The MM digits will now flash; pressing [+] increases the time in minutes, and pressing the [-] will decrease the time. Press [OK] to accept the selected minutes, taking you to the next display. Pressing [-] returns you to the previous display. Pressing [-] returns you to the previous menu.

PUMP P1: ON TIME  
START TIME: HH:MM  
[+] or [-] TO CHANGE  
[OK] SAVE [-] RETURN

PUMP P1: OFF TIME  
STOP TIME: HH:MM  
[+] or [-] TO CHANGE  
[OK] SAVE [-] RETURN

After Selecting [OK] in display [PUMP P1: ON TIMER], the control unit will display the [PUMP P1: OFF TIMER] to the right. The HH digits flash, and pressing [+] increases the time and [-] decreases it.

Pressing [OK] accepts the selected hour HH and takes you to the next display to set the minutes. Pressing [-] returns you to the previous display.

The MM digits will now flash; pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected minute's MM and takes you to the next display to set the [PUMP P2: ON TIMER]. Pressing [-] returns you to the previous display.

The [PUMP P2: ON TIMER] display on the right will show, and the exact steps to set the PUMP P2: ON and OFF times can be followed as above.

Pressing [OK] at the end of setting [PUMP P2: OFF TIME] MM will take you back to the DDS. Pressing [-] returns you to the previous display.

**NOTE: By default, the P1 and P2 ON & OFF times are 00:00. If they are set to 00:00, nothing happens. The Pool System ignores 00:00.**

PUMP P2: ON TIME  
START TIME: HH:MM  
[+] or [-] TO CHANGE  
[OK] SAVE [-] RETURN

PUMP P2: OFF TIME  
STOP TIME: HH:MM  
[+] or [-] TO CHANGE  
[OK] SAVE [-] RETURN

### 7.3 Chlor Output

CHLOR SETTING automatically controls the Chlorine output for your Pool System.

This feature is convenient when you want to run the pump for extended hours (e.g., with a variable-speed pump or if you wish to do additional filtration). In this case, chlorine levels need to be decreased.

The factory setting is set to 100%.

Pressing [+] or [-] anytime in the DDS screen increases or decreases the setting in 1% increments.

CHLOR OUTPUT is also accessed by pressing the [OK] button in the MAIN MENU and scrolling to CHLOR OUTPUT (Menu 3).

CHLORINE OUTPUT  
SETTING: xxx%  
[+] or [-] TO CHANGE  
[OK] SAVE [-] EXIT

## 7. Control Unit Menu Guide

### 7.4 Salt Test

The SALT TEST menu lets you measure your swimming pool's salt or mineral level. A reading will appear on the screen; allow at least 30 seconds for an accurate reading.

**BEFORE PERFORMING A SALT TEST, ENSURE THE CELL IS CLEAR OF ANY CALCIUM DEPOSITS, AS THIS WILL INSULATE THE ELECTRODES AND IMPACT YOUR READINGS.**

**If manual cleaning is required, see 9.1 Inspecting and Cleaning the Cell Electrode.**

Enter the main menu by pressing [OK], then scroll to Salt Test (Menu 4) and press [OK] again. A salt measurement is taken, and a range is displayed. An approximate TDS reading is indicated immediately after, and these measurements will alternatively scroll until the [<] button is pressed and the display returns to the DDS. Alternatively, you can press and hold the [+] and [-] buttons for more than 3 seconds to access the salt test.

The ideal TDS reading should be "OK" and approximately 3500-4000 ppm. If "HIGH" is displayed, the salt level is above 4500 ppm, and the salt level is too high, we suggest taking a sample to your local pool Professional for a more accurate result and further assistance.

Similarly, if the display indicates "LOW," take a pool water sample with your pool professional for more accurate results and advice.

Low salt levels (below 1000 ppm) and high salt levels (above 8000 ppm) are challenging to measure, and results may become inaccurate. Your cell may need replacing. Contact your local pool Professional for a more accurate result and further assistance.

The SALT TEST measurement is meant to be a guide only, as many factors can impact the result. We recommend you take your pool water sample to your local pool Professional before adding salt or minerals or replacing your Cell.

**NEVER add more salt if not required.**

**NEVER add salt directly to the skimmer box.**

SALT TEST MODE  
SALT: OK  
[<] TO END

SALT TEST MODE  
SALT: HIGH  
CONSULT A POOL SHOP  
[<] TO END

SALT TEST MODE  
SALT: LOW  
CONSULT A POOL SHOP  
[<] TO END

SALT TEST MODE  
APPROXIMATE TDS  
LEVEL IS: xxxxx ppm  
[<] TO END

## 7. Control Unit Menu Guide

### 7.5 Chlor Boost

CHLOR BOOST sets your B-Clear Pool System to operate for 8 hours and automatically sets the chlorine setting to 100%. This allows for extra sanitising time, known as Chlorine Boost or Super-Chlorinate. The bottom line will alternate between "CHLOR BOOST to END" and the fault message if there is any fault during CHLOR BOOST.

CHLOR BOOST is entered by pressing the [OK] button in the MAIN MENU and scrolling to CHLOR BOOST (Menu 5).

The Control Unit automatically defaults to 08:00 hours of ON time, and the timer starts counting down immediately.

The first two digits **08** will flash while adjusting them, as shown to the right.

Pressing [+] or [-] increases or decreases in increments of 01:00 hour whilst running. Chlor boost can be set up to 72 hours.

The Control Unit will return to the DDS screen in the last selected POWER/MODE state when completed.

You can exit the CHLOR BOOST function by pressing [<]. This will return the Control Unit to the DDS screen and its previous setting.

CHLOR BOOST TIME  
SETTING: 08:00:00hrs  
[+] OR [-] TO CHANGE  
[<] TO END

## 7. Control Unit Menu Guide

### 7.6 Backwash

Backwash is entered by pressing the [OK] button in the MAIN MENU and scrolling to Backwash (Menu 6). Entering the backwash menu assists you in operating your pump and filter during the backwash process.



#### IMPORTANT INFORMATION BEFORE PERFORMING A BACKWASH

NEVER OPERATE THE FILTER LEVER WHILE THE PUMP IS RUNNING; YOU MAY DAMAGE THE SEAL, AND LEAKS MAY OCCUR.

THE PUMP WILL START AND STOP AS YOU REQUIRE.

ENSURE ALL THE VALVES, VALVE HANDLES, LIDS, BASKETS, ETC. ARE IN THE CORRECT POSITIONS AS PER THE REQUIREMENTS OF THE MANUFACTURERS OF THAT EQUIPMENT.

ALWAYS FOLLOW THE MANUFACTURER'S INSTRUCTIONS.

IF UNSURE, PERFORM BACKWASH MANUALLY BY ACCESSING THE MODE SETTING MENU (MENU 7.6) AND POWERING ON & OFF TO DO THE FILTER CLEAN.

Set the multiport value to Backwash. Pressing [OK] starts the pump for 2 minutes, and TIME LEFT will be displayed automatically, counting down in 1-second increments. If you wish to increase the backwash time, use the [+] or to stop the pump, press the [-] button and then the [+] button to restart or if the dirty water in the waste pipe or sight glass is clear press [OK] to finish.

RINSE MODE will then be displayed.

Pressing [OK] stops the pump, and RINSE MODE is displayed.

Rotate the filter multi-port valve to the rinse position, ensure the handle locks in place and once ready, press [OK] to enter the RINSE MODE cycle. Pressing [-] allows you to exit, and this takes you to BACKWASH COMPLETED.

Pressing the [OK] button starts the pump for 2 minutes.

TIME LEFT automatically starts counting down in 1-second increments.

Once dirty water in the waste pipe or sight glass is clear, press [OK] to finish RINSE MODE and enter BACKWASH COMPLETE.

Pressing [OK] stops the pump, and BACKWASH COMPLETED is displayed. Rotate the filter multi-port valve to the filter position, ensure the handle locks in place and once ready, press [-] to finish the backwash and exit to the default display screen.

BACKWASH MODE  
Set MPValve to  
Back-Wash and press  
[OK] NEXT [-] EXIT

BACKWASH MODE  
[+] Add 1min to TIME  
[-] Stop Pump [OK] NEXT  
TIME LEFT: 02:00min

RINSE MODE  
Set MPValve to RINSE  
position and press  
[OK] NEXT [-] EXIT

RINSE MODE  
[+] Add 1min to TIME  
[-] Stop Pump [OK] NEXT  
TIME LEFT: 01:00min

BACKWASH COMPLETED  
Set MPValve to FILTER  
position and press  
[OK] NEXT [-] EXIT

BACKWASH COMPLETED  
Final check on all  
calves/lid positions  
[-] EXIT

## 7. Control Unit Menu Guide

### 7.7 Service Menu

The service menu allows you to undertake several operations, including adjusting mode settings, setting the clock, pump protection, cell cleaning, external controller, display settings, pH controller, Spa setting in the B-Clear Pool System producing chlorine.

#### 7.7.1 Mode Setting

Pressing [OK] from the DDS screen enters the MAIN MENU.

Pressing [+] takes you to the last menus, press [OK] on

7 Service Menu to enter the Service sub-menus.

Pressing [+] or [-] scrolls up or down, and [OK] enters the flashing menu.

Pressing [-] returns you to the Main Menu.

Alternatively, Press and hold the [>] button for more than 3 seconds to access the Mode Setting.

Pressing [OK] on MODE SETTING (Sub Menu 1) enters the display shown to the right, and then pushing the [+] or [-] allows you to adjust the MODE SETTING from AUTO to OFF and to ON.

Pressing [OK] saves the required mode and returns to the previous screen. Pressing [-] returns you to the Main Menu screen.

MAIN MENU  
Simply use buttons  
[+] OR [-] TO CHANGE  
[OK] ENTER [-] EXIT

5 CHLOR BOOST  
6 BACKWASH  
7 SERVICE MENU  
[+]UP[-]DN[OK] ENTER

MODE SETTING  
Setting: AUTO  
[+] OR [-] TO CHANGE  
[OK] SAVE [-] EXIT

#### 7.7.2 Clock Setting

Your Control Unit comes with a built-in digital timer. The clock setting displays are all in 24-hour format.

Clock Setting is entered by pressing the [OK] button in the MAIN MENU, scrolling to Service Menu (Menu 7), and then selecting Clock Setting (Sub Menu 2).



It is important to understand the difference between **CLOCK SETTING** and **FILTER TIMES**; **Clock** means the physical time of the day (e.g., 08:00), and **FILTER TIMES** means the settings programmed to turn the system ON and OFF.

## 7. Control Unit Menu Guide

CLOCK SETTING allows you to program the exact time of the day.

HH digits flash and pressing [+] increases the time, and [-] decreases the time.

Pressing [OK] accepts the selected hour HH.

Pressing [<] exits you to the Main Menu screen.

MM digits flash and pressing [+] increases the time, and [-] decreases the time. Pressing [OK] accepts the selected minute MM.

Pressing [<] returns you to the previous display.

CLOCK SETTING  
ACTUAL TIME: HH:MM  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] EXIT

CLOCK SETTING  
ACTUAL TIME: HH:MM  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] EXIT

PUMP PROTECTION  
Setting: xxx minutes  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] EXIT

CELL CLEANING TIME  
Setting: xxx hours  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] EXIT

### 7.7.3 Pump Protect

PUMP PROTECT is designed to protect your pump if there is no flow of water. This means the time the pump is allowed to run after the water sensor on the Cell detects there is no flow of water. The pump will be turned off from 3 to 10 minutes after detecting no water flow.

PUMP SETTING is entered by pressing the [OK] button in the MAIN MENU and scrolling to the Service Menu (Menu 7) and entering Pump Protect (Sub Menu 3).

The default setting is 3 minutes and pressing [+] or [-] allows you to adjust when the pump is turned off. Pressing [OK] saves the required protection time.

### 7.7.4 Auto Cell Cleaning

Innovative self-cleaning technology allows the polarity of the B-Clear Cell plates to change direction every 4-16 hours (depending on your setting). The change of polarity causes the calcium to dislodge, keeping the B-Clear plates clean. Please note that occasional cleaning of the plates may be necessary.

The factory setting is every 7 hours, and this can be adjusted from as low as 4 hours (for high calcium areas) to as high as 16 hours.

In areas where the water's calcium hardness is low (less than 200 ppm), cell cleaning may not be necessary.

When calcium levels exceed 200 ppm, regular cell inspection and cleaning in an acid solution are necessary.

CELL CLEANING is entered by pressing the [OK] button in the MAIN MENU and scrolling to the Service menu (Menu 7) and then entering AUTO CELL CLEANING (Sub Menu 4).

## 7. Control Unit Menu Guide

### 7.7.5 External Control

If you need to set the Pool System to remain ON all the time, such as when using an external controller, you can do so in this menu setting.

You can access this function by pressing the [OK] button to enter the MAIN MENU, scrolling to the SERVICE MENU (Menu 7), and pressing [OK].

To access the EXTERNAL CONTROLLER MENU, scroll through the SERVICE MENU using the [+] or [-] buttons until you reach EXTERNAL CONTROLLER ( Sub Menu 5). Then press [OK] to enter the display on the right.

The default setting is OFF. Pressing [+] or [-] allows you to adjust the setting from OFF to ON. Pressing [OK] saves the required setting.

The default display screen (DDS) will now display EX at the top right corner, indicating that the external control function is activated.

EXTERNAL CONTROLLER  
Setting: OFF  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] BACK

OUTPUT: 100% (+) EX  
Mode: ON HH:MM  
Cell: FWD Pump: ON  
[OK] ENTER MENU

### 7.7.6 Brightness

BRIGHTNESS is entered by pressing the [OK] button in the MAIN MENU and scrolling to Service Menu (Menu 7) and entering by pressing [OK], then selecting BRIGHTNESS (Sub Menu 6).

The factory setting is 60%.

Pressing [+] or [-] allows you to adjust the BRIGHTNESS. Pressing [OK] saves the selection.

BRIGHTNESS MODE  
Setting: 60%  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] BACK



**IMPORTANT:** If you are using the **Brauer Swim B-Balanced pH Controller 150** with its own control screen, please disregard the section below. Instead, refer to the B-Balanced 150 Instruction Manual for proper setup and guidance.

### 7.7.7 pH

The default setting on your LCD B-Clear Pool System is for the acid dosing controller to be turned "OFF". pH CONTROL MODE must be turned on to operate if you are using any other compatible pH Controller. Contact Brauer Swim to confirm compatibility.

pH CONTROL MODE is entered by pressing the [OK] button on the main menu and scrolling to the Service Menu (Menu 7), then entering pH CONTROL MODE (Sub Menu 7) in the service menu. Pressing [+] or [-] allows you to adjust the pH MODE settings from OFF to ON and ON to OFF. Press [OK] to SAVE the selection.

pH1 Run Time is programmed automatically when setting up the swimming pool's volume in the Pool System. The Pool System calculates the minutes per day your pH controller should run based on the pool's volume, and this can be manually changed from 0 to 120 minutes per day.

To adjust the pH Run Time, enter the Main Menu by pressing the [OK] button, scroll to Service Menu (Menu 7), then scroll to pH (Sub Menu 7), and select pH1 Run Time.

pH CONTROL MODE  
pH MODE: OFF  
[+] OR [-] TO CHANGE  
[OK] SAVE [<] BACK

pH CONTROL MODE  
pH1 Run Time  
pH2 Demand or Prime  
[+] UP [-] DN [OK] ENTER

## 7. Control Unit Menu Guide

The LCD will now show 'On Time: ---- min/day'.

Press [+] or [-] to adjust the ON Time in min/day.

Pressing [-] returns to the previous pH CONTROL MODE menu.

Pressing [OK] saves the required run time and returns you to the main menu.

Saving this Run Time will result in saving the time as the new daily default running time of the system.

pH RUN TIME  
ON Time: 20 min/day  
[+] OR [-] TO CHANGE  
[OK] SAVE [-] BACK

**NOTE:** Some states use undiluted hydrochloric acid to feed the pH controller (i.e., there is no container with a 1:3 mix). In this case, the operator needs to manually change the run time in Menu 'pH1 Run Time' from the displayed result to approximately  $\frac{1}{4}$  of this reading (i.e., if 15 minutes/day is displayed, then change this to 4 minutes/day by following the instructions above).

If you are using a low-fuming type of acid, such as 32% sulphuric acid, then you may need to double the run time as its ability to lower the pH is less than that of hydrochloric acid. Once again, you need to test your water weekly until you reach the optimum setting for your Pool System.

The 'pH2 DEMAND or PRIME' quantity can be manually adjusted from 0 - 500 ml. The default reading is always 100 ml. This function is useful for Priming tubes after an acid drum change or adding the required acid from your acid demand test.

pH2 DEMAND OR PRIME  
Acid Demand: 100ml  
[+] OR [-] TO CHANGE  
[OK] SAVE [-] BACK



**IMPORTANT:** Enter the exact amount from your test result in ml (e.g., 250 ml), and the Pool System automatically adds four times that amount, thereby allowing for the 1:3 ACID: WATER mix ratio in the acid drum.

To select the 'pH DEMAND or Prime' function, enter the main menu by pressing the [OK] button and scrolling to Service Menu (Menu 7) and then scrolling to 'pH' (Sub Menu 7), then select 'pH2 Demand or Prime'. Press [+] or [-] to adjust the quantity of acid required in millilitres (ml).

Pressing [OK] saves the required quantity, the peristaltic pump starts turning, and a time-based 'min' reading starts counting down.

You can lower the time by pressing the [-] menu if you wish.

Pressing [-] returns to the previous pH CONTROL MODE menu.

Pressing [OK] saves the required run time and returns you to the main menu. If the lines are primed, you can stop the peristaltic pump by pressing [-] while in the 'pH2 DOSE TIME LEFT' menu to lower the 'Time Left' to 0 min.

**NOTE:** When using undiluted acid to feed the pH controller (i.e., there is no container with a 1:3 mix), the operator needs to manually change the dose time in Menu 'pH1 DOSE TIME LEFT' from the displayed result to about  $\frac{1}{4}$  of this reading (i.e., if 48 min is displayed, then change this to 12 min by following the instruction above).

pH2 DOSE TIME LEFT  
Time Left: 24 min  
[+] OR [-] TO CHANGE  
[OK] SAVE [-] BACK

## 7. Control Unit Menu Guide

To turn off the acid dosing, press the [OK] button on the main menu, scroll to the Service menu (Menu 7), and then scroll to pH (Sub Menu 7). Press [OK] on 'pH Control Mode'. Then use the [+] or [-] button to change the selection from ON to OFF, and press [OK] to save.

**NOTE:** The pH software includes a feature that adjusts the pH run time based on the Pool System output setting. For instance, for a 50K pool, the pH run time is set to 20 minutes. In SPA mode, at 10% output, runtime is reduced to 2 minutes. If your Pool System output is 75%, the runtime will be 15 minutes. However, if you adjust the runtime, this will become the new default runtime, and the Control Unit will not change the output by itself.

pH2 CONTROL MODE  
pH Mode: ON  
[+] OR [-] TO CHANGE  
[OK] SAVE [-] BACK

### 7.7.8 Contrast

CONTRAST is entered by pressing the [OK] button in the MAIN MENU, scrolling to the Service Menu (Menu 7), and selecting CONTRAST (Sub Menu 8).

The contrast can be set from 20% to 100%. The default setting is 50%.

Pressing [+] or [-] allows you to make the CONTRAST adjustment, and pressing [OK] saves the required CONTRAST and returns it to the DDS screen.

CONTRAST MODE  
Setting: 50%  
[+] OR [-] TO CHANGE  
[OK] SAVE [-] EXIT

### 7.7.9 Spa Mode

SPA MODE allows your Control Unit to be adjusted to suit your spa.

SPA MODE is entered by pressing the [OK] button in the MAIN MENU, scrolling to the Service Menu (Menu 7), pressing [OK], and then selecting SPA MODE (Sub Menu 9).

Pressing [+] or [-] allows you to adjust the SPA MODE settings from OFF to ON and ON to OFF.

Selecting the OFF setting leaves the OUTPUT SETTING at 100%, while selecting ON changes it to 10%. Spa output can be set between 0 to 20%.

When SPA MODE is selected, the DDS screen will change, as shown to the right.

Pressing [OK] saves the required settings and returns to the DDS Screen.

SPA MODE  
Setting: OFF  
[+] OR [-] TO CHANGE  
[OK] SAVE [-] EXIT

OUTPUT: 10% (\*) TI  
Mode: SPA HH:MM  
Cell: FWD Pump: ON  
[OK] ENTER MENU

### 7.7.10 Pool System Hardware & Software

This menu provides information about the Control Units' hardware and software settings and should be accessed by a pool technician. Don't hesitate to contact your technician for further information.

## 8. Water Chemistry



The B-Clear Pool System is designed for use with swimming pool water balanced following the Langelier Saturation Index with a pH range of 6.8-7.8. As previously advised, for best performance and operation of your Pool System, certain water balances must be maintained within your swimming pool. Have your water tested regularly. Transport the test water in an opaque container and do the test as soon as possible for the best results.

### 8.1 Chlorine

**Measurement Interval: Once a week**

Ideal Chlorine (Free Chlorine) Levels: 2-3ppm (2-3mg/L) and no more than 4ppm (4mg/L). Adjust the chlorine output by pressing [+] in DDS to increase the required output set point in 1% increments up to 100%. Pressing [-] will decrease the output in 1% increments to 0%. Running the system for longer or shorter hours can achieve the same result.

### 8.2 Salt

**Measurement Interval: Every 4-6 weeks**

Salt or Mineral Levels: 3000-4000 ppm (3500 ppm ideal) and no more than 4500 ppm.

Although the System does not consume salt or minerals, they are lost during backwashing, pool overflow, splashing, and on the pool's bathers. The correct salt or mineral level allows for the most efficient production levels and electricity consumption.

The salt or mineral level **SHOULD NOT** go below 3000 ppm. Operating the system with too little salt or minerals in the pool will cause damage to your Cell.

Salt and/or minerals are the essential elements by which your system operates. Not enough salt or mineral means not enough chlorine—this simple rule governs the total operation of your B-Clear Pool System, and insufficient salt or minerals will damage your Cell. Use Ultrafine Salt or Premium Salt to maintain optimum salt levels.

The system will operate with good stability on higher salt or mineral levels, but running at the correct level is still advisable to prevent damage. Salt or mineral levels above 5000 ppm may overload the system and cause excessive heat.



**NEVER ADD SALT OR MINERALS DIRECTLY TO THE SKIMMER BOX.** This high salt or mineral concentration will pass through your filtration, pump, and pool equipment.

**HANDY TIP:** The colder the water, the lower your output, but this does not mean you need more salt or minerals. There will always be less chlorine demand in colder water.

We recommend 3.5kg of Ultrafine salt per 1000 litres of pool water; a 50,000-litre new pool needs approximately 175 kilograms of salt. The system can operate on mineral/magnesium chloride salts, and you should allow an extra 20-30% more product to achieve the correct TDS for your system to run efficiently.

Salt or minerals should always be added to the pool's shallow end and allowed to dissolve. Do not let the salt or minerals settle on the pool floor, which may damage the surface. Use your pool brush to mix the salt or minerals into the water.

Running the pump will mix the water and help the salt or minerals to dissolve.



**Low salt or mineral levels (3000ppm) will destroy the coating on the Cell and void the warranty.**

## 8. Water Chemistry

### 8.3 pH

**Measurement Interval: Once a week**

Ideal pH Levels: **Concrete Pools: 7.4 - 7.6**  
**Fibreglass/Vinyl Pools: 7.0 - 7.2**

A pH of 8.0 makes oxidation only about 26% efficient, so keeping your pH in range is critical.

A correct pH level must be maintained to prevent problems such as black spots, staining, cloudy water, and other problems. An incorrect pH level can also damage the surface finish and walls of your pool. You can add hydrochloric acid to lower the pH when it is high.

You can add pH Increaser - sodium bicarbonate (soda ash) to increase the pH when pH is low.

### 8.4 Total Alkalinity

**Measurement Interval: Every 4-6 weeks**

Ideal Total Alkalinity Levels: **Concrete Pools: 80 - 150ppm**  
**Fibreglass/Vinyl Pools: 80 - 120ppm**

Total Alkalinity should not be confused with pH, although the two are closely related. Total Alkalinity determines the speed and ease of pH change and is measured in ppm. You should use a test kit that includes a test for Total Alkalinity. Low Total Alkalinity can cause unstable pH levels. This causes an inability to keep the pH constant and may cause staining, etching, and corrosion of metals. High total alkalinity will constantly cause high pH levels.

When total alkalinity is high, you can add hydrochloric acid (a little at a time) to lower it. When it is low, you can add a pH Increaser, sodium bicarbonate, to raise it.

### 8.5 Calcium Hardness

**Measurement Interval: Every three months**

Ideal Calcium Hardness Levels: **Concrete Pools: 250 - 300ppm**  
**Fibreglass/Vinyl Pools: 150 - 190ppm**

In addition to pH and Total Alkalinity, Calcium Hardness must be kept in balance so that your pool water does not become too corrosive or end up scaling the surface of your pool. These conditions are symptoms of unbalanced swimming pool water.

### 8.6 Stabiliser

**Measurement Interval: Every 4-6 weeks**

Ideal Stabiliser Levels: **30 - 70ppm**

The importance of pool stabilisers cannot be overemphasised. It is essential in helping retain chlorine in your pool. Chlorine is rapidly dissipated by sunlight, and using Stabiliser will reduce this dissipation dramatically. Without Stabiliser, running the system for longer hours may be necessary.



#### **THE MOST IMPORTANT NOTICE AND WARNING:**

Only add chemicals in the method and quantities as indicated on the packaging provided or advised by your local pool Professional. Also, if in doubt about any results you achieve, then do not hesitate to consult with your local pool Professional.

## 9. Maintenance

Maintenance of your Pool System is simple. Your Control Unit is one of the most productive pieces of equipment on your swimming pool, so it requires some essential maintenance.

While water chemistry will always be the most essential form of maintenance, there are also other hints and pointers to consider.

**DO NOT** cover the Control Unit with towels or similar. Some vents could be closed, and these need air to keep the Control Unit cool.

To extend the life of your Control Unit we always recommend installation in an undercover area away from the elements.

Placing the Control Unit in a closed shed or similar environment with chemicals, fertilisers, and other corrosives could damage it and void your warranty.

Always keep the Pool System off whilst backwashing your sand filter. Please remember to turn it on once the backwash is done and return the Control Unit to AUTO mode. See **7.6 BACKWASH** for further details.

At least once a year, check that the plug connections on the Cell, and at the System's base are tight and in sound condition.

### 9.1 Inspecting and Cleaning the Cell Electrode

Reverse Polarity cells should not usually require cleaning. However, in areas with extremely hard water, all calcium may not be removed. A calcium deposit might form on the lower regions of the cell, the sensor, or the sides of the cell plates. This will affect the operation of your Pool System; however, you can use a Cell Cleaner to clean the Cell.

All salt Pool System cells must be cleaned before scale/calcium builds up to the point where the electrode gaps in the Cell are bridged. If the Cell has an excessive calcium deposit, this may damage the electrode coating, as the bridging causes a rubbing on the place coating, affecting the operation.

Check the Cell to prevent the accumulation of pool debris that may have bypassed the pool filter, particularly after backwashing.

Check that the O-ring is clean, greased with silicone grease (DO NOT use petroleum-based jelly), and securely located in the Cell Housing.

#### For cleaning, please follow these steps:

Switch the Control Unit from "AUTO" to "OFF," which will prevent the pump and system from turning on.

Unscrew the Cell Locking Ring and remove the electrode for inspection. If calcium build-up is present, immerse the electrode in Cell Cleaner.

A solution can be made by mixing 1 part hydrochloric acid with 10 parts water. If excessive build-up is present, a more robust solution may be used to remove the calcium.

Using five parts of water will make a more aggressive solution but will not damage the Cell. You can use Cell Cleaner; if you do, follow the instructions.

Allow the cleaning solution to dissolve the calcium deposits for about 10 minutes. Then, dispose of the cleaning solution at an approved Council Depot, never into stormwater or sewage drains.

## 9. Maintenance



#### HANDY TIP:

Returning this mix to your pool only returns the calcium you just removed, so you may be better off reusing the solution until exhausted than disposing of it. Always store this solution in a safe method as advised on the container.

**DO NOT** scratch or bend the electrode plates in the Cell Housing. Ensure that the O-ring is clean, greased and properly seated.

Rinse the electrode in clean water and re-fit the electrode in the Cell Housing, ensuring that the Cell Locking Ring is hand-tight and secure.

When mixing acid with water, **ALWAYS ADD THE ACID TO WATER. NEVER ADD WATER TO ACID.** Eye Protection, mask and gloves should be worn when cleaning the cell.

### 9.2 Inspecting the Control Unit

The Control Unit usually requires little or no maintenance.

Ensure the Control Unit's 3-pin plug plugs into a suitable weatherproof RCD-protected 10amp outlet. Ensure that the pump plugs into the 3-pin AC Socket at the Control Unit's bottom. Check all plugs and cords for damage. If damaged, the manufacturer, their agent, or a similarly qualified person should replace it to avoid a hazard.

If the Control Unit is to be hard-wired, then a qualified electrician must complete the installation.

The Control Unit has air vents to cool internal components in hot weather. The Control Unit has a unique oil spray applied to the inside of the Control Unit during production to stop the insects from entering the system. To help keep the insects away, periodically apply a surface spray on the wall or post the Control Unit is mounted on. **DO NOT** spray directly into the Control Unit; make sure the power is off when you use a spray. Allow adequate time for the spray to dry before turning the power on again.

# Maintenance Logbook

| MONTH       | WATER TEST |
|-------------|------------|
| Recommended | Monthly    |
| 1           |            |
| 2           |            |
| 3           |            |
| 4           |            |
| 5           |            |
| 6           |            |
| 7           |            |
| 8           |            |
| 9           |            |
| 10          |            |
| 11          |            |
| 12          |            |

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|----|--|
| 1  |  |
| 2  |  |
| 3  |  |
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| 7  |  |
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| 10 |  |
| 11 |  |
| 12 |  |

# Maintenance Logbook (continued)

| MONTH       | WATER TEST |
|-------------|------------|
| Recommended | Monthly    |
| 1           |            |
| 2           |            |
| 3           |            |
| 4           |            |
| 5           |            |
| 6           |            |
| 7           |            |
| 8           |            |
| 9           |            |
| 10          |            |
| 11          |            |
| 12          |            |

|    |  |
|----|--|
| 1  |  |
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| 8  |  |
| 9  |  |
| 10 |  |
| 11 |  |
| 12 |  |

## 10. Troubleshooting



If you suspect your B-Clear Pool System is not performing or running as it should be, here are some handy troubleshooting tips that may assist you.

| No.  | Fault Indication                      | Potential Cause   | Remedy  |
|------|---------------------------------------|---|---|
| 10.1 | FAULT MESSAGE DISPLAYS                | There are numerous causes.  | See the LCD DISPLAY for the reason, then go to that section in this troubleshooting guide.  |
| 10.2 | HIGH SALT WARNING                     | Salt is too high, or there is a short on the cell plates.                         | Check Salt guide (sec. 7.4/8.2).<br>Check that the cell is free of foreign materials (e.g., wire, metal, touching plates, etc.).          |
| 10.3 | INTERNAL TEMPERATURE HIGH             | There is no airflow in the area around the Control Unit or excessively high salt. | Ensure Control Unit is mounted in a well-ventilated area free of chemicals and fertilisers.<br>Check Salt guide (sec. 7.4/8.2)            |
| 10.4 | LOW SALT or CLEAN CELL or FAULTY CELL | Low salt level.   | Check salt level (sec. 7.4/8.2)   |
|      |                                       | The buildup of calcium on the Cell plates.  | Calcium acts as an insulator and needs to be removed.<br>See Cleaning of Cell Electrode (sec. 9.1).                                       |
|      |                                       | The water temperature is low.   | Winter water temperatures can be extremely low. For every 1°C below 28°C, the output can drop 2-3%.                                       |
|      |                                       | Insufficient water flow through the Cell.   | Check the water flow and ensure a full chamber of water is passing over the Cell. You may need to backwash your filter (sec. 7.6).        |
|      |                                       | The Cell could be damaged or at the end of its life.                              | Damaged coating will reduce cell life and reduce output.<br>If all conditions are correct, then the Cell could be at the end of its life. |
|      |                                       | The level is low in one direction but OK in the other.                            | The Cell may need cleaning (sec. 9.1) or have run its life in one direction.  |

## 10. Troubleshooting

| No.  | Fault Indication                              | Potential Cause   | Remedy   |
|------|---|---|--|
| 10.5 | NO CURRENT FLOW - NO OUTPUT                   | Faulty CONTROL or MAIN PCB.   | Faulty PCB - contact for service.  |
| 10.6 | WATER FLOW FAULT                              | Low water flow.<br>No water flow.   | Possible closed valve, pump fault, burst pipe.<br>Water does not cover the water sensor.   |
|      |   | Low-speed pump not supplying sufficient water to cell housing.            | Increase the speed of the pump until the housing is filled.  |
| 10.7 | WATER TEMP SUDDENLY INCREASES                 | No water flow.  | Possible closed valve, pump fault, burst pipe.   |
| 10.8 | NOT OPERATING AT ALL - NO DISPLAY ON          | Not plugged into the power point or the power point not turned on.        | Check that the Control Unit POWER CORD goes into the wall outlet and the outlet is turned on.  |
|      |   | System is plugged into the power point and turned on, but still no power. | Test wall outlet with a working appliance.   |
|      |   | The wall outlet is working, but still no power.                           | Check CIRCUIT BREAKER at bottom of Control Unit.<br>Press the white button to reset if tripped.  |
|      |   | CIRCUIT BREAKER is pressed and reset, but still no power.                 | If you have checked all the above, then there is an internal fault - contact for service.  |
|      |   | CIRCUIT BREAKER stays out in a tripped state.                             | Faulty CIRCUIT BREAKER - contact the service department.   |
| 10.9 | NOT OPERATING AT ALL - COMES ON BUT TURNS OFF | CIRCUIT BREAKER resets but trips again.                                   | Excessively high salt - check salt (sec. 7.4/8.2) and lower it if needed<br>Short across Cell plates - remove the Cell and check the plates for any metal lying across the plates<br>Faulty rectifiers, transformer, or Cell cable call for service. |

## 10. Troubleshooting

| No.   | Fault Indication                                       | Potential Cause                                      | Remedy   |
|-------|--|--|--|
| 10.10 | EVERYTHING DISPLAYS OK, BUT NOT TURNING ON             | Incorrect POWER MODE settings.                       | Check whether the POWER/MODE setting is in ON or AUTO.   |
|       |  | Yes, it works now.                                   | Check TIMER settings (sec. 7.1) in CLOCK/TIMER Mode.   |
|       |  | No, it does not work.                                | Check the LCD display for faults. If only the LCD DISPLAY is ON, but nothing works, call for service.                              |
| 10.11 | SIGNS OF MELTING OR BURNING OF THE CELL CONNECTOR PLUG | Moisture entry into the cell plug.                   | If melted, then it will need replacing otherwise clean it with WD40 or similar. Return for service if melted.                      |
| 10.12 | OUTPUT READING IS LESS THAN 100%                       | Low salt level.                                      | Check salt level (sec. 7.4/8.2).   |
|       |  | The buildup of calcium on the Cell plates.           | Calcium acts as an insulator and needs to be removed. See Cleaning of Cell Electrode (sec. 9.1).                                   |
|       |  | The water temperature is low.                        | Winter water temperatures can be extremely low. For every 1°C below 28°C the output can drop 2-3%.                                 |
|       |  | Insufficient water flow through the Cell Housing.    | Check the water flow and ensure a full chamber of water is passing over the Cell. You may need to backwash your filter (sec. 7.6). |
|       |  | The Cell could be damaged or at the end of its life. | Damaged coating will reduce cell life and reduce output. If all conditions are correct, then the Cell could need replacing.        |
|       |  | Level low in one direction but OK in the other.      | The Cell may need cleaning (sec. 9.1), or the Cell may have run its life in one direction.   |
|       |  | The continuous buildup of calcium.                   | See 9.1. and Sec 8.5   |

## 10. Troubleshooting

| No.   | Fault Indication   | Potential Cause  | Remedy  |
|-------|--|--|---|
| 10.13 | CONTROL UNIT ONLY WORKS IN ONE DIRECTION. NO OUTPUT IN ONE DIRECTION.  | Faulty rectifiers, transformer, or PCB.  | Return Control Unit for service.  |
| 10.14 | THE TIMER IS NOT FUNCTIONING CORRECTLY IN AUTO   | Incorrect settings.  | Make sure POWER/MODE is set to AUTO. Refer to this manual (sec. 7.7.1) for instructions on setting the timer.   |
| 10.15 | THE POOL PUMP OUTLET IS NOT FUNCTIONING CORRECTLY, OR THE PUMP IS ALWAYS ON                                    | The pump not plugged into the base of the Pool System.                         | Check that the pump is plugged into the bottom of the Control Unit and not directly into the wall outlet. Make sure you are set in AUTO mode and not MANUAL for normal running.   |
| 10.16 | THE CELL IS NOT CLEANING EXCESSIVE CALCIUM BUILDUP ON THE CELL, OR THE CONTROL UNIT IS NOT CHANGING DIRECTION. | Excessively high calcium, change of direction time set too high or faulty PCB. | See the Calcium Hardness test (sec 8.5) and adjust the water accordingly. Change the Cell Cleaning times (sec. 7.7.4). Manually try changing direction by holding both [<] and [>] buttons in for 3 sec (you must be in the default display screen for this to work). Failure of this to work could indicate a faulty PCB - return for service. |
| 10.17 | LOW OR NO CHLORINE OUTPUT  | The system is not working correctly.   | Go through Troubleshooting from 10.1.   |
|       |  | The Stabiliser is too low.   | Check the Stabiliser guide (sec 8.6).   |
|       |  | The Control Unit is not set correctly.   | Basic settings such as Output Control and Timer running hours must be checked. Go through all settings in sec. 7 and balance water accordingly.   |
|       |  | The salt level is too low.   | Check Salt guide (sec. 7.4/8.2).  |
|       |  | pH is too high.  | Check the pH guide (sec. 8.3).  |
|       |  | Cell at the end of its life.   | If full output is not reached, then it could be a failing Cell.   |
| 10.18 | THE TIMER LOSES TIME WHEN THE MAINS POWER IS REMOVED   | Battery life expired.  | In the unlikely event of this occurring, return for service.  |

## 10. Troubleshooting

**DISCLAIMER:** This guide intends to provide general information on a particular subject(s) in good faith and is not an exhaustive treatment of such subject(s). Its use is beyond the control of the author, contributor, publishers, and distributors and should not be relied upon without consulting qualified, professional and comprehensive advice. This guide includes subject(s) that should only be performed by or under the direction and guidance of qualified and licensed professionals. Under no circumstances should the guide be used as a substitute for such professionals. No representations or warranties are made that this guide's content, advice, and recommendations are current, free from errors or omissions, or appropriate for the user's circumstances or abilities. No liability or responsibility is accepted for any loss suffered because of any user's reliance on such content. Repairs should only be conducted by qualified people or Certified Brauer Swim Partner's appointed agents. Brauer Swim reserves the right to refuse a warranty if any damage is caused to the Pool System or auxiliary pool equipment that is not a result of a manufacturer's defect.

## 11. Warranty

**THIS EQUIPMENT HAS BEEN MANUFACTURED AND TESTED TO THE HIGHEST STANDARD AND ACCORDINGLY CARRIES THE FOLLOWING WARRANTY.**

- 11.1 The B-Clear Control Unit and Electrolytic Cell will be repaired at no charge for a period of 3 years from the date of purchase should it be found, after examination, that the failure has been caused by faulty workmanship or materials. This is a back-to-base warranty.
- 11.2 Adverse operating conditions beyond the manufacturer's control, such as improper voltage or water pressure, excessive ambient temperature, or any condition that adversely affects the performance of the equipment, will render this warranty invalid.
- 11.3 Defective equipment must be returned to the manufacturer or dealer as soon as the purchaser becomes aware of the defect, and all transport must be prepaid. Neither the manufacturer nor the dealer shall be responsible for any goods damaged in transit.
- 11.4 If the equipment is found to be defective after examination, it will be repaired or replaced free of charge (other than transport costs, which will be borne by the purchaser). However, if upon inspection of the equipment, it is found that the terms of this warranty are not satisfied, then the usual charges of the manufacturer for repair or replacement will be made.
- 11.5 Any liability of the manufacturer pursuant to the Trade Practices Act 1974, as amended, for a breach of a condition or warranty shall be limited to replacing or acquiring the equipment (or part thereof) where the same has been supplied.
- 11.6 The maximum liability incurred by the manufacturer shall not, in any case, exceed the contract price for the equipment or the product parts or components thereof claimed to be defective. Further, the manufacturer shall not be liable for any loss, damage or delay directly or indirectly caused by any equipment malfunction, defect, or failure other than as expressly provided in this warranty.
- 11.7 Products sold by the manufacturer are designed for use with swimming pool water balanced in accordance with the Langelier Saturation Index with a pH range of 6.8-7.8. The chlorine level should not exceed 4ppm, and the salt level should not exceed 4500ppm.
- 11.8 The manufacturer will not be held liable for damage caused by, but not limited to, corrosion, scaling, or stress.
- 11.9 The warranty clauses provided above, must be read in conjunction with any additional warranty information published on our website at <https://brauerswim.com/warranty>. In the event of any inconsistency or conflict between the above warranty terms and those stated on our website, the warranty terms above shall prevail to the extent of the inconsistency.

*Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.*

## 11. Warranty



### The Warranty is void under the following circumstances:

- Installation is conducted incorrectly by any person other than a person authorised by us to do so.
- The Control Unit or Cell is serviced by any person other than a person authorised by us to do so.
- Correct salt levels are not always maintained.
- The Control Unit is not protected from the elements.
- The Control Unit is not operated in a position/area with good ventilation.
- Water has been allowed to enter the Control Unit.
- Insect infestation or penetration by dust, sand, or other foreign particles inside the Control Unit.
- Damage beyond our control.
- Equipment that has been misused, neglected, damaged, repaired without authorisation or altered in any way.
- This warranty is applicable to workmanship and materials only.
- This warranty is not transferable under any circumstance.
- Keep your original purchase invoice and serial number in a safe place.



### Claiming Warranty on your B-Clear Pool System.

When making a warranty claim, please note the following information MUST be provided, or the claim may not be approved.

- Model Number
- Control Unit Serial Number
- Cell Serial Number
- Proof of Purchase showing the Purchase Date and Purchased From
- Installation Date
- Installer
- Your Full Name
- Your Phone number
- Your Address Details
- The running hours are displayed on the LCD screen, and the alpha/numeric code after it.
- Details of the Issue

## 11. Warranty

Please complete the Warranty Registration Form as soon as possible by scanning the following QR Code or click on the following:

**Warranty Registration Link:** <https://brauerswim.com/warranty-registration-form/>



See Model & Serial Number Information on last page of this Instruction Manual.

## Product Support

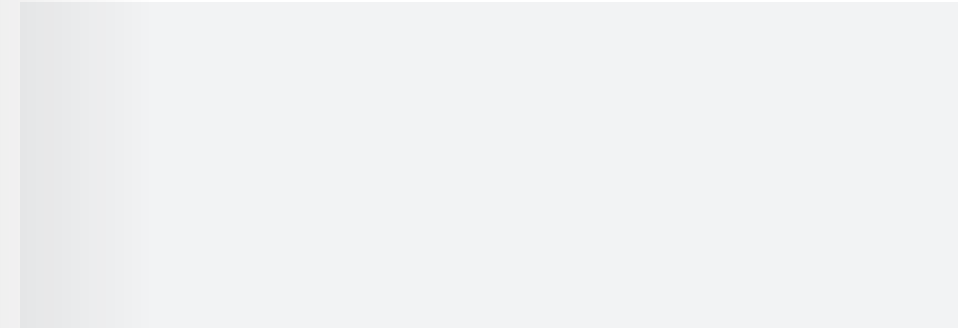


Product support can be obtained by scanning the following QR Code or use the following website link:

**Product Support Link:**

<https://brauerswim.com/product-support-contact-form/>

## Model & Serial Number information



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