



**Operators &
Installation Guide**



IMPORTANT:

PLEASE READ OPERATORS MANUAL BEFORE USE. PLEASE KEEP FOR FUTURE REFERENCE AS THIS DOCUMENTATION INCLUDES IMPORTANT INFORMATION IN MAINTAINING YOUR WATER SANITISER.

NOTE TO INSTALLER:

This document contains important information about the installation, operation and safety guidance on the use of the Quest Q1. You must read the installation guide and take note of the operation of the system. Once the system has been installed, please leave operation and installation manual with the customer.

WARNING !

Only operate the Quest Q1 when you have the pool pump switched on and you have water flowing through the ioniser ,oxidiser and de-scaler chamber.

WARNING !

This system must be installed and serviced by a qualified pool or water sanitiser technician. Incorrect installation and servicing could create electrical hazards and could result in damage to the property, fire, serious injury or death.

WARNING !

Only have the system installed by a qualified electrician and all electrical work including wiring carried out to the local electrical regulations.

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Please Read Carefully

Please read and follow all instructions as they have important safety instructions warning to a risk of fire, electric shock, or injury to a person or persons using the Quest Q1 water sanitiser.

- This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.
- Keep the appliance located away from children or if this is not possible make sure an adult is present at all times when the pool sanitisation system is working. Cleaning and user maintenance should not be made by children.
- To reduce the risk of injury, service should only be attempted by a suitably qualified Quest pool authorised dealer or agent.
- Do not operate an electrolytic cell without water circulation in the cell. A build-up of gases will result in hazardous conditions.
- If you employ a pool maintenance contractor, ensure that they read and follow these instructions as this freshwater system differs from common chlorine / salt sanitisers.

The best results with the freshwater system are obtained by following a few simple rules:

- Do not use stabiliser.
- Do not use bromine compounds.
- Do not use aluminium based or any other flocculants.
- Do not use Soda Ash.
- Do not use Granular Chlorine. The use of Granular Chlorine may cause black staining of the pool rendering if it is added undiluted to a pool treated by our System.
- Do not throw un-dissolved chemicals into the pool. Clean the pool filter regularly.

1.1 System Operation

Thank you for purchasing your Quest Q-1 freshwater pool sanitiser. Follow the instructions below and you will enjoy the benefits of low maintenance and the exceptional water quality achievable with this system. During periods of intense use or when there has been significant water dilution or contamination more frequent testing and active management may be required.

Warning

It is important that the Q-1 system only be allowed to operate when the pool pump is running so that water is flowing through the ionisation/oxidation chamber and the EM descaler when they are in operation.

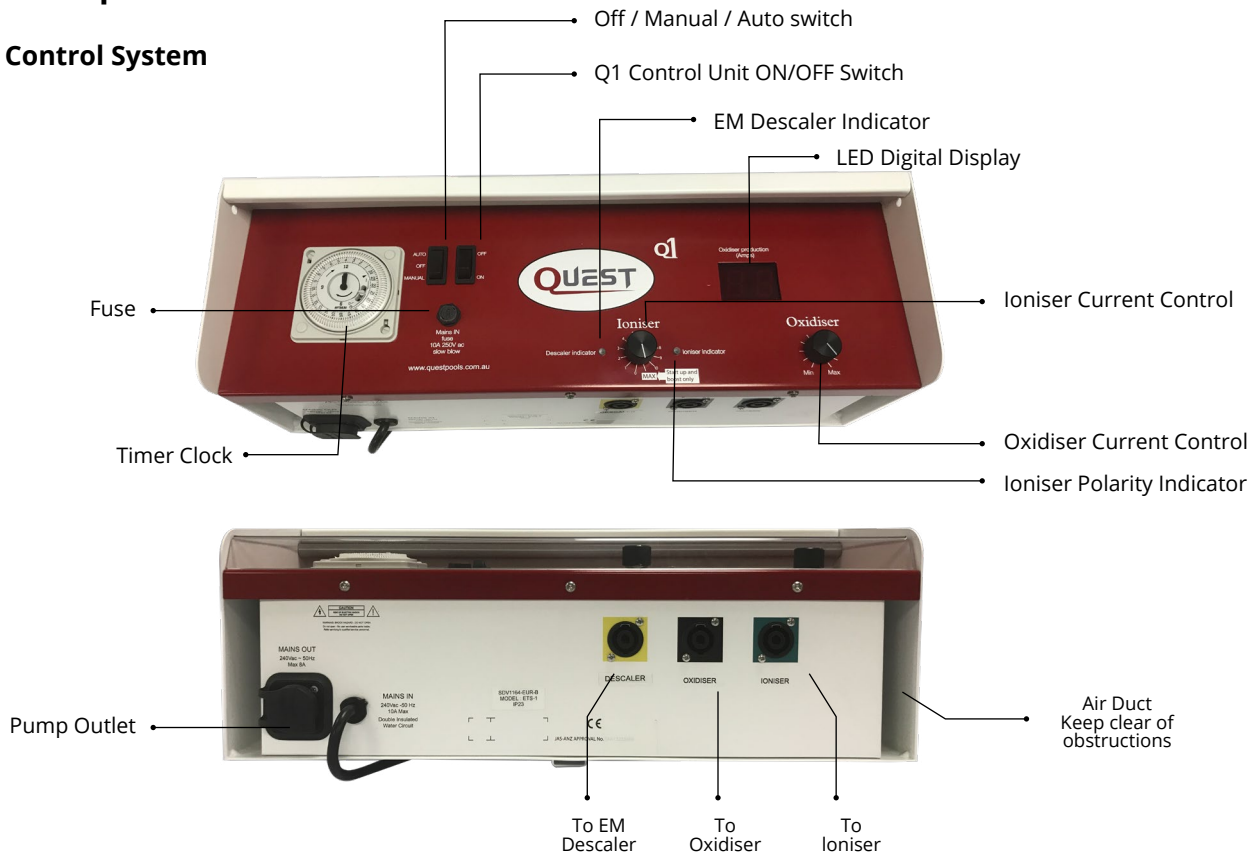
Normal drinking water can have a mineral imbalance for use in a swimming pool. In those areas where mineral imbalance exists, the pool water will need initial balancing. A balanced pool is necessary for proper disinfection and will assure freedom from possible staining and scaling problems. Mineral imbalance and improper pH control can significantly complicate maintenance and have a serious deteriorating effect on the pool itself. After initial balancing of the water, mineral balance must be maintained within the proper parameters to provide continued protection and ease of maintenance. Frequency of testing is dependent on weather and pool load.

Do not allow the pool to run a high pH and or high Copper levels. This is easily avoided by regular testing. We recommend that you test the pool water every two weeks with the test kit provided.

The chemicals required to keep your pool balanced and healthy will be a buffer such as sodium bicarbonate and hydrochloric acid. In addition you should ensure pool cleaning to remove leaves and dust as usual, as these use up the sanitiser and provide nutrients for algae and bacteria growth.

Quest Q1 Components

ECU Main Control System

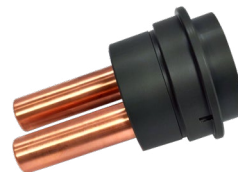


Ioniser and Oxidiser Chambers

The Oxidiser and Ioniser chambers can be installed in two different formats. Horizontal and in a H shape, both chambers are connected by the descaler coupling. This design is designed for the pool engineer to choose the most suitable set up for your filtration system.



Oxidiser and Ioniser



Ioniser Rods



Oxidiser Plates



Descaler

1.1.1 Controls

Timer Clock - Operation



If using the timer
this is set by:

1. Set the time by rotating the central hand to the current time. Note: The timer has a battery backup and it will maintain the correct time if the power is interrupted for less than 48 hours. Following longer periods of power interruption the user will need to reset the timer. Following time changes due to daylight saving the timer will need to be adjusted.
2. Push the small switches out for the period (s) of time for which the Q1 system needs to operate. This will control the amount of time the pool filter pump (when powered from the Q1 unit) will operate in conjunction with Q1 sanitiser. These switches cover a full 24 hours per cycle. Note: proper operation requires that the appropriate switch settings below are set.
3. If the ECU has not been powered on for a period of time, the timer internal battery will need to charge up before timer operation can begin. The time need to charge up the timer internal battery is typically about 2 minutes, but can in some cases be up to 10 minutes. Once operational, the timer internal battery needs about 72 hours of operation to fully charge up. Once the timer internal battery is fully charged up the timer will keep the correct time for up to 48 hours with no power available.

Power Switches

The OFF-ON switch only controls the power to Q1 internal electronics. In the 'OFF' position the Q1 internal electronics are Off regardless of the position of the Auto-Off-Manual switch. In the 'ON' position the Q1 internal electronics are controlled by the Auto-Off-Manual switch as below.

The Auto-Off-Manual switch controls the supply to the Q1 pump outlet and to Q1 internal electronics (when the Off-On switching is in the 'On' position). In the 'Auto' position the power to the pump and internal electronics are controlled by the settings on the timer. In the 'Off' position the pump and internal electronics are always off. In the 'Manual' position the pump and internal electronics are always on.

The Q1 is designed to allow the user to benefit from reduced running of the swimming pool pump by coordinating the operation of the pump with the timer on the Q1. If it is desired that the pool pump should be operating 24/7 then its power supply should be independent of the Q1, leaving the Q1 timer to operate the sanitizing process only.

Switch Positions	OFF	ON
AUTO	Q1 is always Off Pump is controlled by timer settings	Q1 is controlled by timer settings Pump is controlled by timer settings
OFF	Q1 is always Off Pump is always Off	Q1 is always Off Pump is always Off
MANUAL	Q1 is always Off Pump is always On	Q1 is always On Pump is always On

Fuses

Refer to Maintenance Section 4.1.1 for details.

EM descaler Indicator

This LED cycles repeatedly through several colours indicating that the descaler is operating correctly.

Ioniser Current Control

This control is used to adjust the current applied to the Copper / Silver electrodes. This in turn affects the rate at which ions are released into the pool. Upon initial installation run the ioniser at 100%. Thereafter reduce to 50% and check Copper concentration. Adjust the ioniser control up or down to get the correct Copper level indicated in Section 1.1.3

Ioniser Polarity Indicator

This LED changes colour from red to green every six minutes to indicate the polarity of the Ioniser electrodes has changed. Changing the polarity assists in cleaning the electrodes and ensures that they wear evenly. Please note the LED is only lit while the ioniser is running. e.g. on setting 1 this is 6 seconds in each 6 minute cycle.

Oxidiser Current Control

This control is used to adjust the current being applied to the Oxidiser plates. The current produced by this control will be displayed on the Oxidiser production LED digital display.

Oxidiser Production Digital Display

This display shows the status of the Oxidiser plates and has a range of values.

Value	Indication
01 to 16	A value in the range of 1-16 indicates the current (in Amps) being applied to the Oxidiser plates. The Q1 control unit limits to a maximum of 15 Amps. When the Oxidiser Current Control is at maximum the display should show 14-16. If the display at maximum is below 14-16 amps this is either due to low TDS levels or a high internal temperature. Refer to Section 3 for TDS adjustment. At settings below maximum a lower current value will be displayed.
OF	The current being applied to the plates is negligible or non-existent. This will be the most likely reading when the Oxidiser Current Control is set to minimum
d6	The system is in de-gas mode. When the unit reverses polarity approximately every 24 hrs it goes into the de-gas mode (no power to the cell) for 1 hour. This purges the cell before powering up in the opposite polarity.
Pb	The display will flash indicating that the system is not applying current to the oxidiser plates due to any of the following. Air in the system Insufficient water flow Calcium build-up on plates
SU	Indicates the unit is in a start-up self-check mode. The start-up mode lasts for 10 seconds during which time the Control Unit checks and monitors the system configuration. If any faults are found these are shown on the display with the appropriate indicator. If no fault is found the output currents ramp up to their preset mode as determined by the Ioniser and Oxidiser Current Controls.
TP	This indicates an undesirable internal temperature in the Control Unit. If this occurs the unit will shutdown to prevent any damage to the System Controller. Likely causes of this message are: Excessively low TDS Air-flow vents on the underside of the unit are blocked Excessive ambient temperatures

1.1.2 Pool Balance

Balance Parameter	Symptoms	Ideal Range	Measurement	Adjustment
Alkalinity	pH difficult to maintain pH bounce Bather discomfort Corrosion Cloudy water	80-150 ppm	Use supplied test kit	Raise by using Sodium Bicarbonate. Approx 450 grams per 10,000 litres (e.g. 2.25kg for 50,000 litres) to raise from 60ppm to 100ppm.
pH	Reduced sanitation effectiveness Plaster and concrete etching Corrosion Cloudy water Bather discomfort	Cement and Plaster 7.2-7.5 Vinyl and Fibreglass 6.8-7.2	Use supplied test kit. We recommend checking the pH level of the water every 2 weeks. New concrete pools require weekly checks of the pH for 2-3 months, until the concrete has fully cured.	The pH of your pool water is increased by adding sodium bi-carbonate and reduced by adding hydrochloric acid or sodium bisulphate (dry acid). Dry acid at the rate of 50 grams per 10,000 litres Hydrochloric acid add 50 ml per 10,000 litres When mixing acid with water, ALWAYS ADD ACID TO WATER, NEVER ADD WATER TO ACID Test pH again; and if it is still high repeat until the correct pH level is obtained.
Water Hardness	Etching and Corrosion Cloudy water	200 - 250ppm	Take sample to pool shop	In order to reduce calcium, you will need to dilute the pool water by draining part of the water and adding new water. Calcium chloride can be added to the pool in order to raise calcium hardness. In order to raise calcium hardness by 10 ppm, you can add 150 grams of calcium chloride per 10,000 litres of pool water.

1.1.3 Copper testing

1. Please ensure your pH level is below 7.4 before attempting a copper test.
2. Please use the test kit supplied with your Quest Q1 system.
3. Your copper levels should be between 0.2-0.4 ppm.
4. If your copper reading is above 0.4 ppm turn the ioniser dial to off.
5. Turn back on the ioniser once the level reaches 0.3 ppm or lower.
6. In normal operating conditions your ioniser should only be on maximum in the start up procedure or when the copper levels are low.



2.0 Basic Theory

There is no such thing as a maintenance-free pool. However, the Q1 system requires only a few minutes each week to keep your pool in top condition whilst saving money. This section of the manual gives some basic insight into the theory of the processes at work in your pool when using the Q1 system.

2.1 Ionisation

The system works by electrolysis. Electrodes of Copper and Silver alloy are used to produce Copper and Silver ions in the water. Silver has been known since Roman times to be an effective bactericide. Copper is highly efficient at preventing and removing algae in water. In addition, the combination of Copper and Silver ions form a cooperative interaction to enhance the bactericide action. This form of sanitisation works faster and is significantly more effective

at eradicating bacteria than traditional chlorine sanitiser chemical treatments. The required levels of Copper and Silver introduced to the swimming pool is well below acceptable drinking water standards making for a very safe residual sanitiser.

2.2 Electronic Oxidisation (ORP generator)

Traditionally Copper and Silver ionisation systems have required an oxidiser to be added to the pool water to help burn out organic compounds (oils, dust, leaf stains etc.). The most common form of oxidiser used for this purpose has been chlorine. There is a growing concern regarding the adverse health effects of chlorine and its associated by-products (Chloramines)

We have eliminated the need to add chlorine to the pool by incorporating an electronic oxidising unit into the system. ORP stands for Oxidation-Reduction Potential. In practical terms, it is a measurement of the ability to oxidise contaminants. ORP is the only practical method we have to electronically monitor sanitiser effectiveness. In some parts of the world, it is also known as Redox Potential. Using electrolysis the Q-1 system produces the oxidiser in sufficient quantities to maintain an acceptable ORP.

2.3 EM Descaler

EM Descaler used in the Q-1 system further helps to improve the water quality by removing existing scale and preventing the formation of scale in the water. This process improves the efficiency and reduces the operating costs of the pool filtration/circulation and heating equipment.



3. Initial System Start-Up

WARNING !

This system must be installed and serviced by a qualified pool or water sanitiser technician. Incorrect installation and servicing could create electrical hazards and could result in damage to the property, fire, serious injury or death.

For ideal operation the system requires a TDS level of between 600-1000 ppm to provide conductivity for its electronic processes. When converting Salt Water Pools or pools where TDS exceeds 2000ppm please contact your reseller for further advice.

If TDS is low adding 5kg of pool salt per 10,000 litres of water will raise the TDS by around 500ppm.

For new pools, or those that have just been refilled, add pool salt to ensure the conductivity of the water is high enough for the ionisation process to take over. If retrofitting to an existing pool the conductivity of the water should be sufficient for the system process to initiate. **Please note the salt is only added to the water to produce conductivity and not chlorine.**

When the system is initially installed, it will need to be run continuously for a period of time to allow the various processes to take effect in the pool. The time taken to initialize the system will vary depending upon the volume and conductivity of the pool water. Typically a 50,000 litre pool would take 48 to 60 hours to build up the Copper level to the required 0.25 ppm.

Perform the following steps to allow the system to be running in the start-up mode:

1. Turn on the pool pump so that water is flowing through the filtration system, the Q-1 ionisation/oxidation chambers.
2. Make sure that the ionisation/oxidation chamber is filled with water.
3. Turn both control knobs (Ioniser and Oxidiser) on the Q-1 control box fully counter-clockwise to the "MIN" settings.
4. Turn on the power switch on the control unit.
5. Set the AUTO-OFF MANUAL Switch on the Control unit to "MANUAL" setting.
6. The LED display will show "SU" indicating that the unit is in its start-up mode. Wait 10 seconds for the unit to complete its power-up checks.
7. Then, adjust the control knobs (Ioniser and Oxidiser) so they are one step up from the MIN settings (turn clockwise one step).
8. The EM descaler LED on the control box should now be illuminated. It will change colour through a sequence of white / cyan / red / blue / yellow / purple / green / white indicating the correct operation of the unit.
9. The Ioniser LED on the control box should now be illuminated green or red (dependent on Ioniser polarity). The Ioniser LED will stay lit for an initial 6 seconds after which it will extinguish. If it does not initially illuminate, increase the Ioniser setting by turning the Ioniser control knob clockwise one step.
10. The LED display should now show the Oxidiser output current (01 through to 16). If "OF" is displayed increase the Oxidiser current setting by turning the Oxidiser control knob clockwise one step.
11. Turn the Oxidiser knob on the control unit slowly clockwise until the meter reads between 13 - 16 Amps. If the maximum output is below 12 amps the conductivity of the water may be too low. (See previous paragraph)

12. Turn the Ioniser control knob upto the 'MAX' setting.
13. Allow the unit to run for 48 hours.
14. Perform chemical tests to determine readings for pH, ORP, alkalinity, Copper, and calcium hardness.
15. Once readings are at the following levels:
 - Alkalinity: 80 to 150 ppm
 - pH: 7.0 to 7.2 ppm (fiberglass pool)
 - pH: 7.2 to 7.5 ppm (cement pool)
 - Copper Content: 0.2 to 0.4 ppm
 - Calcium Hardness: 200 to 250 ppm
 - ORP: 500-750 millivolts minimum; equivalent to a reading of 0.5-1.5 ppm of chlorine using a DPD test tab

Reduce the run time on the unit to 1 hour per day for every 10,000 litres of water in the pool and turn the knob on the control box under the ioniser meter slowly counter-clockwise until the ioniser output is mid setting (50% output) The system is now operating normally and the initial start-up phase is completed. The Copper output could later be adjusted as necessary to find a setting that will maintain the 0.2 – 0.4 ppm recommended level.

4.0 Maintenance

4.1 Basic Maintenance

The Q-1 system is very low maintenance. The Copper and Silver electrodes and oxidiser plates are self cleaning, but are consumable and require periodic adjustment and replacement. The EM Descaler system is maintenance free.

4.1.1 Fuse

Fuse replacement: 240 Volt, 10 Amp, Slow Blow

WARNING: There is a risk of electrical shock, fire and damage to the unit if an incorrectly sized fuse is installed in the fuse holder.

4.1.2 Adjustment of Copper/Silver Electrodes

The positioning of the Copper/Silver electrodes should be adjusted periodically to provide even wear and maximum discharge of ions into the water.

After several months of operation you will notice that the surface of the electrodes that are closest to each other have eroded. This is normal and means that the Q1 system is successfully losing positively charged Copper and Silver ions into the pool water. With the erosion the distance between the electrodes increases which affects the conductivity and number of ions being released.

When the electrodes are severely eroded they should be replaced before they detach from the threaded rod.

In normal usage the ioniser rods should be replaced after 2 years operation.

WARNING !

Only operate the Quest Q1 when you have the pool pump switched on and you have water flowing through the ioniser ,oxidiser and de-scaler chamber.

4.1.3 Replacement of electrodes and oxidiser plates

The copper and silver electrodes and oxidiser cell are consumables and will require periodic replacement. The life time of both components will depend on many factors including pool use, maintenance, dirt and other debris in the pool. Typically, both the electrodes and oxidiser will last for around two to three years before replacement.

Only replacement components supplied by Quest are authorised to be fitted. Any other manufacturers products will invalidate the warranty.



5 Specifications, Warranty and Contacts

Compliance

Type	Standard	Description
Electrical	AS/NZS 3136 / AS/NZS 60529	Electrical equipment for spa and swimming pools.
Biocidal	APVMA	Australian and NZ Compliance APVMA
Biocidal	Copper CAS 7440-50-8	Biocidal Product Register
Biocidal	Silver CAS 7440-22-4	Biocidal Product Register
Electrical	EN55014, EN61000-3-2 EN61000-3-3	European Directive Electromagnetic Compatibility and Safety

Warranty Information

Warranty Document

Your Quest Q1 comes with a 24 month manufacturers warranty from the date of installation . Your warranty is invalid if you don't follow the following procedures and policies detailed in the instruction manual.

Do not operate the electrolytic cell without water already circulating within the chamber. A build up of hazardous gases will be generated and will result in damage.

The Oxidiser and Ioniser cells are consumable and as such are not covered under the warranty.

If you are using another person to maintain your Quest pool system make sure they read the operator's manual as the Quest is not a standard chlorine or salt water chlorinator.

For the best results in obtaining a crystal clear and healthy pool please read the following:

1. DO NOT USE A STABILIZER
2. DO NOT USE A BROMINE COMPOUND
3. DO NOT USE ALUMINIUM BASED OR ANY OTHER FLOCCULANTS
4. DO NOT USE SODA ASH
5. DO NOT USE GRANULAR CHLORINE
6. DO NOT USE ANY UN-DISSOLVED CHEMICALS IN THE POOL
7. CLEAN THE POOL FILTER REGULARLY

ALKALINITY: 80-150 PPM

ORP:0.4 PPM MINIMUM AFTER STABILIZATION OF THE POOL

WATER TDS:600-1000 PPM

PH@ 7.2-7.6

COPPER: 0.2-0.4 PPM(CLOSER to 0.2)

PHOSPHATES: 0-100PPB

CALCIUM HARDNESS: 200-250PPM

SERIAL NO: _____

5.1 Pre-Installation

Before installing take care to ensure that you have read the instructions, have all the required equipment and have measured your installation to allow for the length of connecting cables.

The Q1 water sanitisation system

The Q1 Installation kit consists of:

- 1 x Q1 Control Unit
- 2 x Electrolysis cells containing
 - 1 x coated Titanium plate assembly
 - 1 x 2 Cu/Ag electrodes
 - EM Descaler & o-rings
 - Reducers
- Installation Guide (this guide)
- Copper / pH test kit

Additional Installation Materials

The following materials will or may be required:

- pressure pipe
- pipe angles as appropriate to fit
- PVC Pipe cleaner, primer and adhesive
- Cable ties
- Mounting screws for control Unit

Recommended Tools

Only basic tools are required for implementation.

- PVC Pipe Saw
- Electric drill is recommended
- Always wear PPE for power tools

WARNING !

Only operate the Quest Q1 when you have the pool pump switched on and you have water flowing through the ioniser ,oxidiser and de-scaler chamber.

WARNING !

This system must be installed and serviced by a qualified pool or water sanitiser technician. Incorrect installation and servicing could create electrical hazards and could result in damage to the property, fire, serious injury or death.

WARNING !

Only have the system installed by a qualified electrician and all electrical work including wiring carried out to the local electrical regulations.

5.2 Converting Existing Pools

When fitting the Q1 system to existing pools consideration should be given to the treatment that has been previously been applied to the pool.

Previous Treatment(s)	Comments	Recommendations
Chlorine or Bromine		OK to install Q1 with the existing water. The chlorine will dissipate naturally in a few days and does not react with the Q1 processes.
Ozone	This is usually in conjunction with Chlorine.	Ozone has no residual in the water so this is the same as a Chlorine based pool.
Backquacil (Polyhexamethylene biguanide hydrochloride (PHMB))	Often used in conjunction with specialist algaecide (DDAC) and hydrogen peroxide.	Do not install Q1 with existing pool water. It is essential that the pool is completely drained and that any filter media is replaced.
Salt Water Chlorinator	Due to the large amount of Salt in the Pool there is a very high TDS (greater than 3000ppm)	Options are Completely drain and refill Pool. or Operate with the existing water and allow to naturally dilute over time. Note: If the existing water is used the plates in the Cell will generate Chlorine gas – the same as a Salt Water Chlorinator.
Copper Based Algaecides	These leave a residual of copper in the water.	Take care to measure the copper levels in the water with the supplied test kit. Adjust the ioniser levels appropriately – refer to the Operating Manual.
Any other treatments		Contact your reseller

5.3 Filters

The processes used by Q1 mean that excellent filtration can be achieved using standard cartridge or sand filters with coarse sand. Sand filters are the most convenient.

Filter considerations are as follows

Type	Media	Recommendation
Cartridge	Standard Filter	OK with Q1
Diatomaceous Earth (DE)	Filter with DE coating	OK with Q1. Generally high maintenance and fine filtration provides no significant benefit with Q1 installed.
Sand Filter	Coarse Sand	Recommended as providing excellent filtration with Q1 when regularly backflushed.
Sand Filter	Fine Sand	OK with Q1. Fine Sand does not provide significant additional filtration benefit with Q1 installed.
Sand Filter	Glass or silica based media	OK with Q1
OC1	OC1	Ok with Q1

5.4 Chemical Feeders and Control Systems

The Q1 is compatible with Chemical Feeder and Control systems. These systems generally adjust chlorine, pH balance or a combined system doing both tasks.

pH measurement and dispensing of the appropriate chemicals will operate as expected.

Should a Chlorine Feeder be installed expect very little or no Chlorine to be dispensed. These systems determine the Chlorine dosage based on ORP measurement. When the Q-1 system is operated properly no or very little chlorine will be dispensed as the ORP levels should always be adequate.

Note: When installing Q-1 with Chemical Feeders ensure that the Q-1 Wet-end Cell is installed so that the water flows through it before the Chemical Feeder. This will reduce stress on the Q-1 from undiluted chemicals drawing large electrical currents across the plates.

Installation Guide

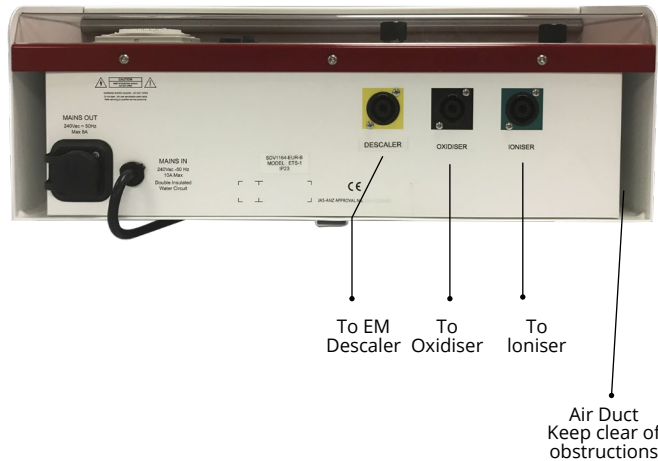


6.0 Installation

There are two (2) components of the water treatment system to install and connect. These are

- Electronic Control Box
- Ioniser/Oxidiser/descaler Unit (Wet Cell)

Before commencing installation consider the length of the standard cables attached to the control box and their ability to easily reach the Wet Cell. All cables are approximately 2 metres long.



The ideal sequence and flow for the water treatment components is:



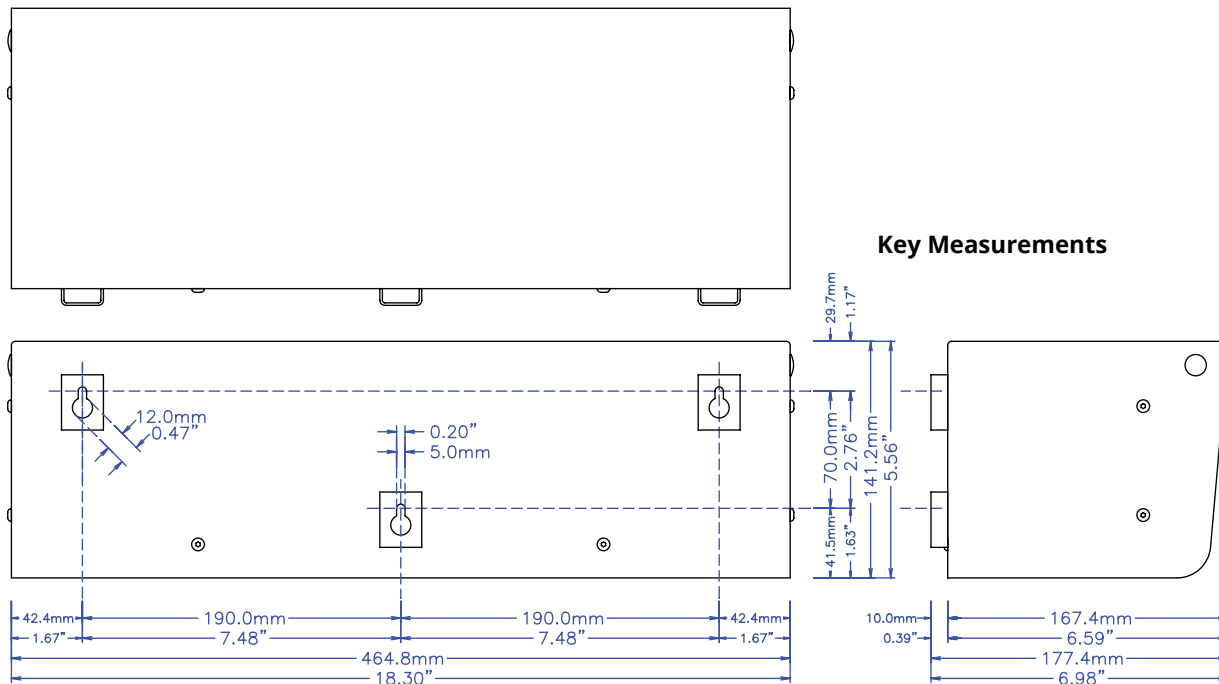
WARNING !

Only operate the Quest Q1 when you have the pool pump switched on and you have water flowing through the ioniser ,oxidiser and de-scaler chamber.

6.1 Control Box

The control box is IP23 rated and approved to EU and other International standards. It is designed for outside or inside installation. Ensure adequate ventilation is provided and that it is in a position where it is unlikely to be flooded, sprayed with water or come into contact with chemicals.

Mount the control box where all cables will reach the power source or components to be connected. It is not recommended to extend cabling beyond the 2 metres (approximately) supplied. It is recommended to securely affix the control box to a suitable vertical surface using the key-hole fixtures below. The Control box should not be free standing or floor mounted.



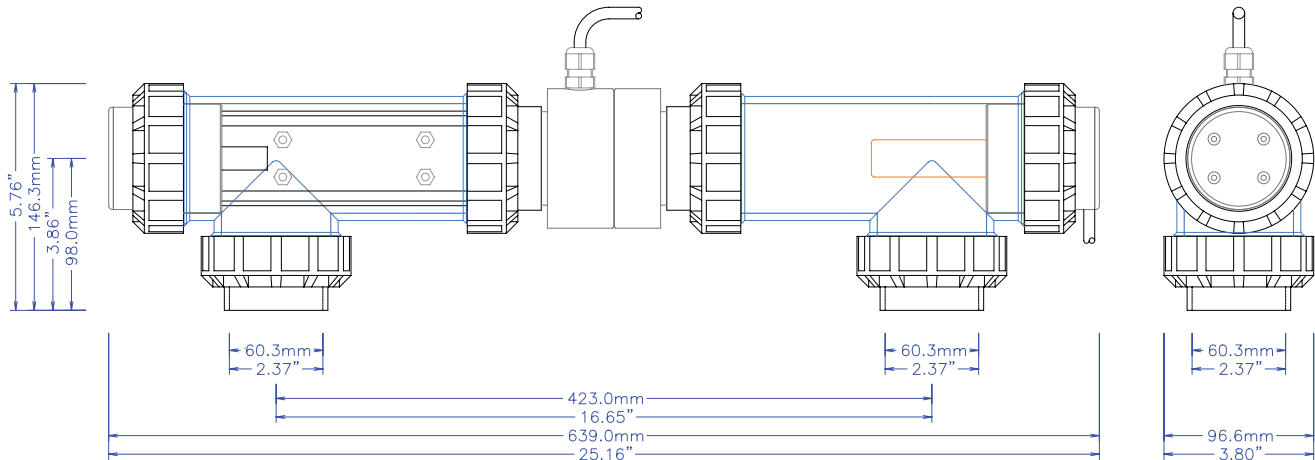
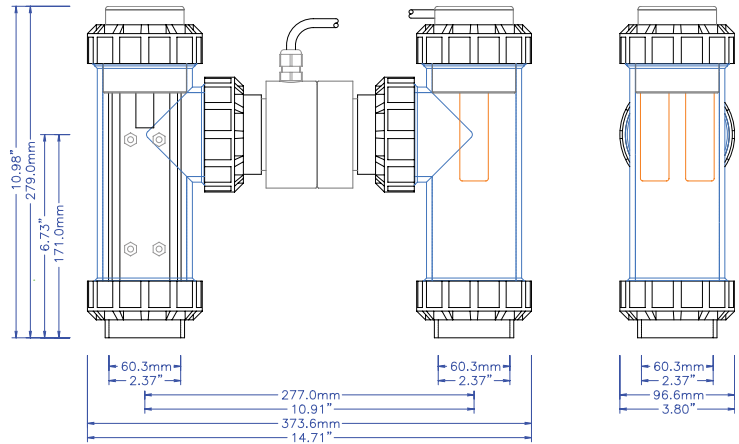
6.2 Ioniser/Oxidiser/De-scaler Unit (Wet-end Cell)

The cell is ideally installed on the outlet from the Filter (or heater where installed) and before any Automatic Chemical Feeders (see above).

Install so that the inflow is over the Oxidiser plates and the outflow is from the Ioniser Electrode end.

Ensure that the cell is fitted to allow access to the plates and rods for maintenance.

Key Measurements



6.3 Troubleshooting

Problem	Possible Cause	What to do to fix it
Blown fuse	Undiluted chemicals added to pool or skimmer basket	Turn off power to control box, replace fuse and allow clean water to circulate through the system before switching on.
Copper level too low	<p>Low conductivity</p> <p>Excessive make-up water added due to leak in pool or equipment</p> <p>Build up of scale on ioniser electrodes</p> <p>Electrodes worn away</p> <p>Pool system not running long enough</p>	<p>Refer to operating instructions</p> <p>Repair leak</p> <p>Clean ioniser rods and ensure that the chemical balance of pool water is correct.</p> <p>Replace with new ioniser electrodes.</p> <p>Refer to operating instructions.</p>
Excessive build up on oxidiser plates	High calcium content (water hardness) in pool water pH too high	<p>Remove oxidiser cell and clean in 75% water 25% hydrochloric acid solution.</p> <p>See section 1.1.2 Pool Balance -Adjusting water hardness.</p> <p>Reduce pH. Refer section 1.1.2.</p>
Oxidiser production display flashing "Pb"	<p>The system has detected a lack of water in the oxidiser cell, this could be due to any of the following:</p> <p>Air in the system. Insufficient water flow.</p> <p>Calcium build up on plates.</p>	<p>Purge air from the oxidiser and ioniser chambers.</p> <p>Increase flow rate through the system.</p> <p>Remove oxidiser cell and clean in 75% water 25% hydrochloric acid solution.</p>
Oxidiser production too low	<p>Low conductivity (TDS)</p> <p>Build up of scale on oxidiser plates</p> <p>Electrodes worn away</p>	<p>Refer to operating instructions</p> <p>Remove oxidiser cell and clean in 75% water 25% hydrochloric acid solution.</p> <p>Replace with new oxidiser electrodes.</p>
Oxidiser production too low or display flashing "tP"	Indicates high operating temperature inside the control unit, the unit will reduce the output or shutdown to prevent damage. This is most likely caused by obstruction of the ECU air vents.	Clear obstructions from ECU air vents.

Contact Information

Manufacturing Plants:

Ecotec Systems Ltd,
Bruntingthorpe Industrial Estate, Lutterworth, Leicestershire,
LE175QZ, England

Email:sales@questsemi.com

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