

Owner Manual



IMPORTANT

Read this manual carefully before operating your PureSilk Chromatolyzer

KEEP IN A SAFE PLACE

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IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions must always be followed.

READ AND FOLLOW ALL INSTRUCTIONS

WARNING: Potential risk of fire, electric shock, or injury to persons is possible if the installation and safety instructions listed in this manual and on the Chromalyzer itself are not followed.

Disconnect all AC power during installation and or removal

Warning: To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

WARNING: Heavy pool (or Spa) usage and higher temperatures may require higher chlorine output to maintain proper free available chlorine residuals

WARNING: To reduce risk of injury, do not permit children to operate this device.

If additional chlorine is required due to heavy bather loads, use liquid chlorine (Sodium Hypochlorite) to maintain appropriate chlorine residual in the water.

Maintaining high salt and chlorine levels above recommended range may contribute to corrosion of pool or spa equipment

DO NOT add Pool or Spa chemicals directly to the skimmer.

The life expectancy of the Free Chlorine and pH reagent bags under normal use conditions (3 tests per day) is 6mths or 750 tests, whichever comes first.

Only use original and proprietary Puresilk Reagent Bags.

Follow all aspects of the local and National Electrical Code(s) when installing Puresilk Chromatalzyer.

NOTE: For outdoor pools, chlorine residuals can be protected from destruction by sun light by addition of stabilizer (cyanuric acid)

For proper sanitation, spas must be completely drained periodically. The number of days between COMPLETE SPA DRAINAGE is equal to the volume of spa water in litres, divided by 10 times the maximum number of daily spa users. Refill spa with water and repeat DIRECTIONS FOR USE of the device.

Health and Hyperthermia warnings for spa devices:

People with a medical condition should consult a physician before entering pool or spa water.

Maximum spa water usage temperature is 40 deg C. Bathing in spa water at 40 deg C should not exceed 15 minutes.

IMPORTANT SAFETY INSTRUCTIONS



Read all sections of this owner manual before installing or using Chromalyzer.

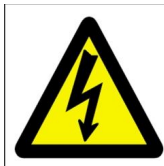
Ensure the Chromalyzer has been installed in accordance with the instructions in this manual.



Do not allow children or unqualified persons to operate or perform any maintenance on this device.

Do not allow children or unqualified persons to come into contact with the chemical dosage equipment, storage drums, feed tubes or injectors.

You must wear protective eye goggles, suitable acid and chlorine resistant gloves and respirator when fitting, filling, servicing or exchanging both solid and or liquid chemical dosage systems and storage containers.



Only those persons electrically qualified and authorised by Poolpower may perform service work or maintenance of an electrical or electronic nature.



Replace Peristaltic Pump tube/s every 12mths – See Peristaltic Pump section.

Check Reagent Bags periodically and replace at least every 6mths.

Caution – only use Puresilk proprietary reagents.



Manually adjust pH and chlorine levels to approximate set points before initiating Chromalyzer.

Manually adjust the Calcium Hardness and Total Alkalinity levels as recommended by your pool professional before initiating Chromalyzer.

Ensure water is regularly tested by a pool professional to confirm all aspects of the pool or spa water are being maintained correctly.

Where bather loads are high, you may be required to manually shock dose the pool with chlorine periodically - consult a pool professional for advise.

Regular testing of pool and spa water is imperative. A free chlorine level of 1 – 3 ppm (pools) or 3 – 5 ppm (spas) should be maintained with periodic manual shock dosing to effectively remove contaminants.

INDEX

Important safety instructions
Important safety instructions
Important safety instructions
Index

Page 1	Introduction
Page 2	How the Puresilk Chromatalyzer works
Page 3	Chlorine Production and Control
Page 4	Water Balance
Page 5	Langlier Index
Page 6-7	Quick start check list
Page 8-9	Installing Reagent Bags
Page 10	Acid reservoir – Safety
Page 11	Acid reservoir – Exchange acid reservoir procedure
Page 12	Liquid chlorine – Safety
Page 13	Liquid chlorine – Exchange chlorine reservoir procedure
Page 14	First time start up procedure
Page 15	Set Pool and or Spa Volume
Page 16	TP – Test Frequency Pool and TS – Test Frequency Spa
Page 17	Set TP – Single water bodies over 10,000lts
Page 18	Set TS – Single water bodies under 10,000lts
Page 19	Set TP & TS – Pool and Spa combination installations
Page 20	Test Frequency verses daily filtration time table
Page 21	Test Frequency table for the requirement of more than 3 tests per day
Page 22	Set AF – Acid Feed
Page 23	Set AF – Acid Feed procedure
Page 24	Set CF – Salt Chlorinator Feed
Page 25	Set CF – Salt Chlorinator Feed procedure
Page 26	Set LF – Liquid Chlorine feed (CPS3 and COMM1000 models only)
Page 27	Set LF – Liquid Chlorine feed procedure
Page 28	Set Chlorine Target
Page 29	Set pH Target
Page 30-31	Aux Time Clock
Page 32	Aux Time Clock – Set 24Hr Clock procedure
Page 33	Aux Time Clock – Set Auto Timer procedure
Page 34	Aux Time Clock – Set Calender
Page 35	Peristaltic Pump Safety and Maintenance
Page 36-37	Peristaltic Pump Tube replacement procedure
Page 38	Installation Guide
Page 39	CPS2 Installation schematic of plumbing and wiring
Page 40	CPS3 Installation schematic of plumbing and wiring
Page 41	COMM1000 Installation schematic of plumbing and wiring
Page 42	Chromatalyzer to Puresilk Chlorinator
Page 43	Bottom view of Chromatalyzer connections
Page 44	Chromatalyzer to Multi Puresilk Chlorinator set up
Page 45	Chromatalyzer to Multi Third Party Chlorinator set up
Page 46-49	Hard Wiring Instructions where this is applicable. (NOT APPLICABLE FOR AUSTRALIA OR NZ)
Page 50	Error Code Register
Page 51-53	Trouble Shooting Guide
Page 54	Chromatalyzer Kits and Optional Parts List
Page 55	Warranty
Page 56	History Notes

INTRODUCTION

The Puresilk Chromatalyzer utilizes proven colourimetric technology and a patented analysis technique to control the pH and chlorine levels in swimming pools and spas. It takes the guesswork out of balancing and treating your pool water and through automation, eliminates the constant requirement to handle dangerous chemicals.

The need to regularly test water, balance pH correction and manage chlorine dosage is very important in maintaining healthy balanced water. Bather load and environmental impacts are dynamic, therefore guessing a dosage requirement to control these parameters is not sufficient. The chlorine demand in a pool may vary enormously with changing bather load, water temp, debris and the application of covers.

Typically, on a domestic pool, the Chromatalyzer will perform three pH and chlorine tests per day. The results of these tests are compared with the targets set. If a correction is required, the Chromatalyzer will initiate a pump or device to feed a prescribed dosage of chlorine and/or acid to the pool or spa water. Where a Salt Chlorinator is installed, the Chromatalyzer will switch the chlorinator ON and OFF to achieve the desired chlorine target.

Where a pool and spa combination exists, the Chromatalyzer is able to establish which volume it is treating with the installation of a flow switch in the spa suction line. The only time the spa suction is utilized is if only the spa is being filtered and treated. The Chromatalyzer therefore recognises if the smaller spa volume is to be treated and alters its dosage calculations. Given the average spa is approximately 25 times smaller in volume than a pool, and is therefore more volatile, the Chromatalyzer automatically increases the frequency of testing to best manage this small body of water.

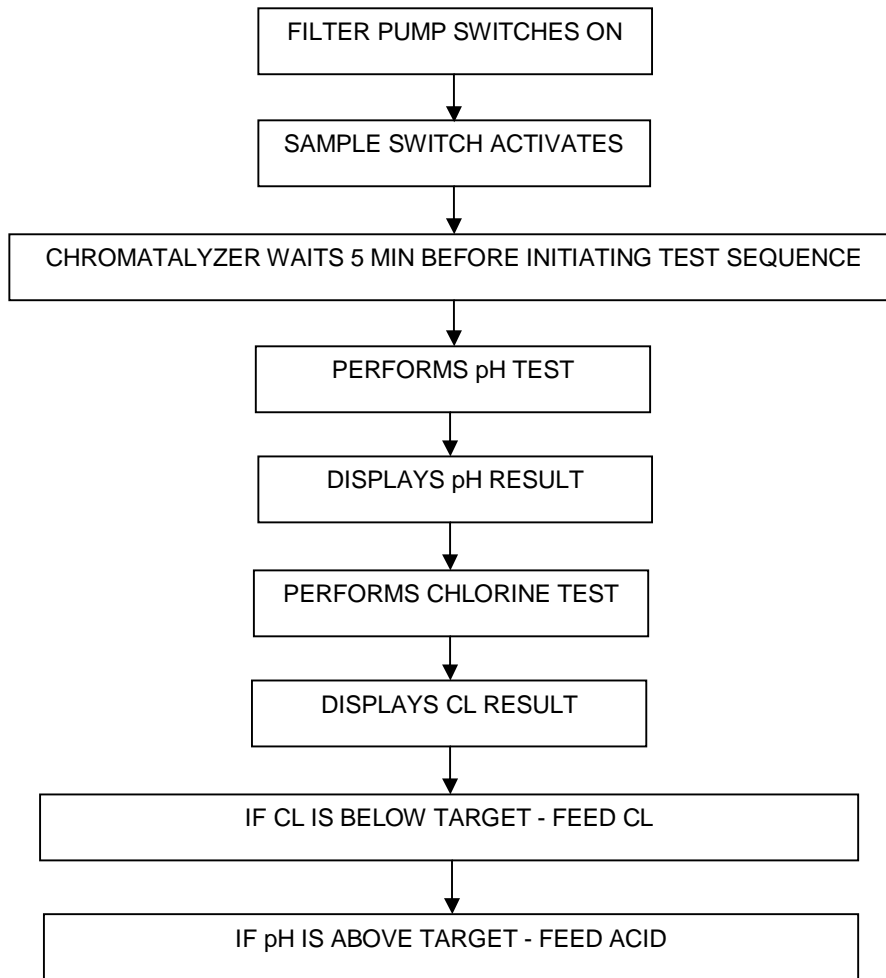
The Puresilk Chromatalyzer will ensure your pool water is correctly sanitised and the pH maintained. The other less volatile balance parameters such as total alkalinity and calcium hardness levels must be checked and adjusted by you local pool professional.

Seven years of ground breaking research and development has resulted in the development of this great Australian product. This innovative technology will benefit pool owners and commercial pools all over the world.

Thankyou for purchasing this great Australian product.

HOW THE PURESILK CHROMATALYZER WORKS

This flow chart is a basic representation of the Chromatalyzer test sequence.



NOTE: CPS2 and COMM1000 (salt chlorinator component only)

Where a salt chlorinator is controlled, both chlorinator and acid feed may occur simultaneously.

CPS3 and COMM1000 (Liquid or Solid Chlorine component only)

Where a liquid chlorine pump or any solid chlorine feed device is controlled, acid will not feed simultaneously with chlorine feed.

Chlorine, if required, will always complete its prescribed dosage before acid feed is initiated.

All chemical feeds immediately stop if the flow switch detects lack of flow.

The acid feed controlling software has built in safety limits to prevent a gross over feed of acid.

This limit based on:

Volume treated per test cycle

Volume treated per 24hrs

Volume treated per 48hrs - If 48hr limit is reached, acid feed stops and alarm sounds.

CHLORINE PRODUCTION AND CONTROL

A free chlorine residual of 1.0ppm to 3.0ppm must be maintained.

The ability of a chlorine generator or liquid chlorine feed pump to maintain the correct chlorine level will depend on the output of the device and the demand imposed by bather load and environmental factors.

Where a salt chlorinator is installed and is controlled by a Chromalyzer, ensure the output of the salt chlorinator is set to maximum.

The Chromalyzer will monitor and control the chlorine level by switching the chlorinator on for calculated periods of time based on demand, water volume and the chlorinator's output capacity.

The CPS3 and COMM1000 have an in-built peristaltic pump which delivers liquid chlorine. The Chromalyzer will monitor and control the chlorine level by switching the peristaltic pump ON for calculated periods of time based on demand, water volume and the Liquid chlorine feed rate.

Testing for chlorine levels is very important and should be performed on a daily basis.

The Chromalyzer achieves this better than any other method or device.

For the typical domestic swimming pool, three tests for both chlorine and pH are performed daily. If the target values are not hit, action is initiated via feed mechanisms to correct the level.

The requirement to super chlorinate or shock dose the pool manually during periods of high chlorine demand is highly recommended and in some or most cases absolutely necessary. Shock dosing the water manually with chlorine breaks irritating chloramines down and provides for safer water with reduced chlorine demand.

When a test reveals low chlorine or zero chlorine, always treat manually with chlorine and investigate.

Check if the chlorine generator or liquid feed pump is operating correctly.

Check if the filtration cycle is operating long enough for chlorine to be introduced.

EXCESSIVE CHLORINE LEVEL

If an excessive chlorine level exists in a pool or spa and it is not intentional, treat with Sodium Thiosulphate.

Sodium Thiosulphate reacts with the chlorine to reduce the level.

Always follow the instructions on the container to apply the correct amount.

CYANURIC ACID – CHLORINE STABILIZER

The sun's ultraviolet light breaks down chlorine so it is essential to use a chlorine stabilizer.

Cyanuric acid or chlorine stabilizer, when dissolved in the pool water to achieve levels of between 40ppm to 80ppm will effectively reduce the breakdown of chlorine by ultraviolet light.

Higher stabilizer levels may in fact be detrimental and hinder the kill rate of chlorine.

Consult with your pool professional.

WATER BALANCE

pH

pH refers to a logarithmic scale 0 to 14 where 0 represents the acidic end of the scale and 14 represents the Alkaline end.
A pH of 7 is neutral.

Salt Chlorination increases the pH of pool water to approx 8.4 whereas Liquid Chlorine has a pH of close to 14 and therefore the effect is greater.
The requirement for acid will be greater where Liquid Chlorine Pools exist.

High pH will reduce the effectiveness of chlorine, potentially cause scale on both the pool and the equipment, and irritate bathers.

Low pH may cause the water to become corrosive, damaging the pool interior finish, equipment and also irritate bathers.

Each pool finish and type has a specific range in which the pH should remain.

Generally a pH of between 7.2 – 7.6 is suitable for most pool types, however those requiring a higher pH will also require a higher chlorine residual. (Consult with your pool shop)

Total Alkalinity (T.A.)

The total alkalinity is a measurement of all the alkalis in your pool water, (Carbonates, Bicarbonates and Hydroxides).

When adjusted within the accepted levels, T.A. acts as a pH buffer, resisting change to the pH.

The recommended T.A. level of your pool may vary from 80ppm – 120ppm depending on the pool finish.

Consult with a pool water professional.

Calcium Hardness

Probably the most ignored of the three yet just as important.

The hardness of your pool water is very important in controlling scale and the corrosive effects of water.

A low calcium level may cause pool water to become corrosive even if the pH is within its recommended range. Corrosive water can damage pool interiors and equipment if left unchecked.

A high calcium level may cause pool water to deposit scale, again even if the pH is within its recommended range.

Scale build up can damage equipment and interiors and make heating appliances inefficient.

Salt chlorinator cells may require very frequent cleaning as a result of high Calcium Hardness.

Generally a level of 100ppm – 200ppm is recommended.

Consult with your pool builder or pool shop.

NOTE: We strongly recommend you seek advice from a pool professional regarding the balancing of water for your pool. A correctly balanced pool will protect it and the equipment from damage and ensure bathers are swimming in clean clear healthy pool water.

Langlier Index

The Langlier Saturation index (Si) is a relationship between the Calcium Hardness, Total Alkalinity, pH and water temperature.

When the water is correctly balanced, the (Si) is +/- 0.2.

A Saturation index of less than -0.2, the water is corrosive.

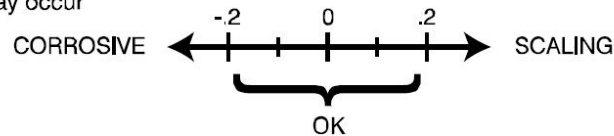
A Saturation index of greater than +0.2, the water is scale producing and staining may occur.

Use the chart below to determine the saturation index.

$$Si = pH + Ti + Ci + Ai - 12.1$$

°C	°F	Ti	Calcium Hardness	Ci	Total Alkalinity	Ai
12	53	.3	75	1.5	75	1.9
16	60	.4	100	1.6	100	2.0
19	66	.5	150	1.8	150	2.2
24	76	.6	200	1.9	200	2.3
29	84	.7	250	2.0	250	2.4
34	94	.8	300	2.1	300	2.5
39	103	.9	400	2.2	400	2.6
			600	2.4	600	2.8
			800	2.5	800	2.9

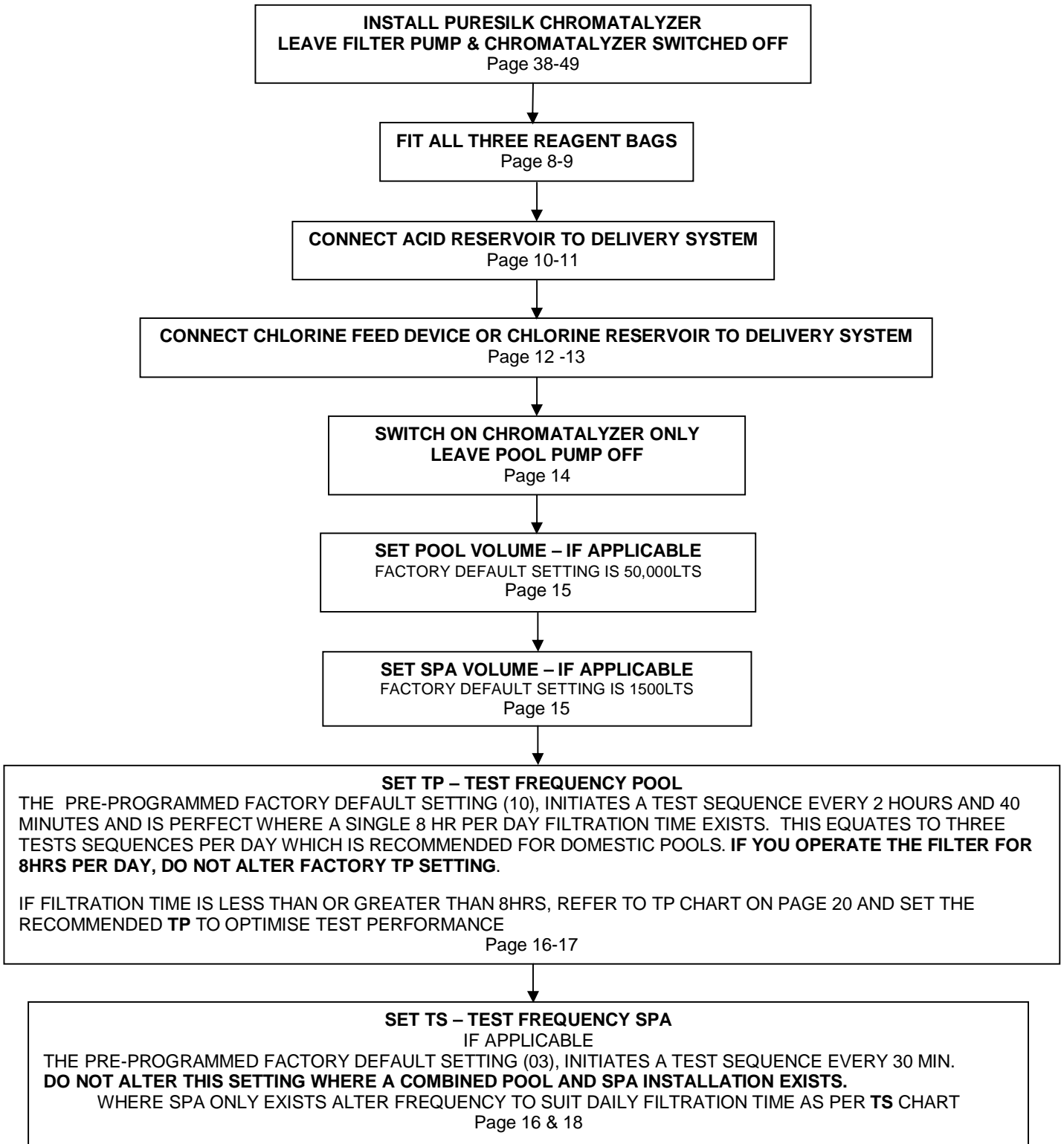
How to use: Measure pool pH, temperature, calcium hardness and total alkalinity. Use the chart above to determine Ti, Ci and Ai from your measurements. Insert values of pH, Ti, Ci and Ai into the above equation. If Si equals .2 or more, scaling and staining may occur. If Si equals -.2 or less corrosion or irritation may occur



QUICK START CHECK LIST – PART 1

Proceed to install and start up the system in accordance with the flow chart below.
Tick each box as it is completed

Where the installation is NOT a pool and spa combination ignore the Spa Volume and TS - Test Frequency Spa settings. These will not be active unless the optional spa switch has been installed.



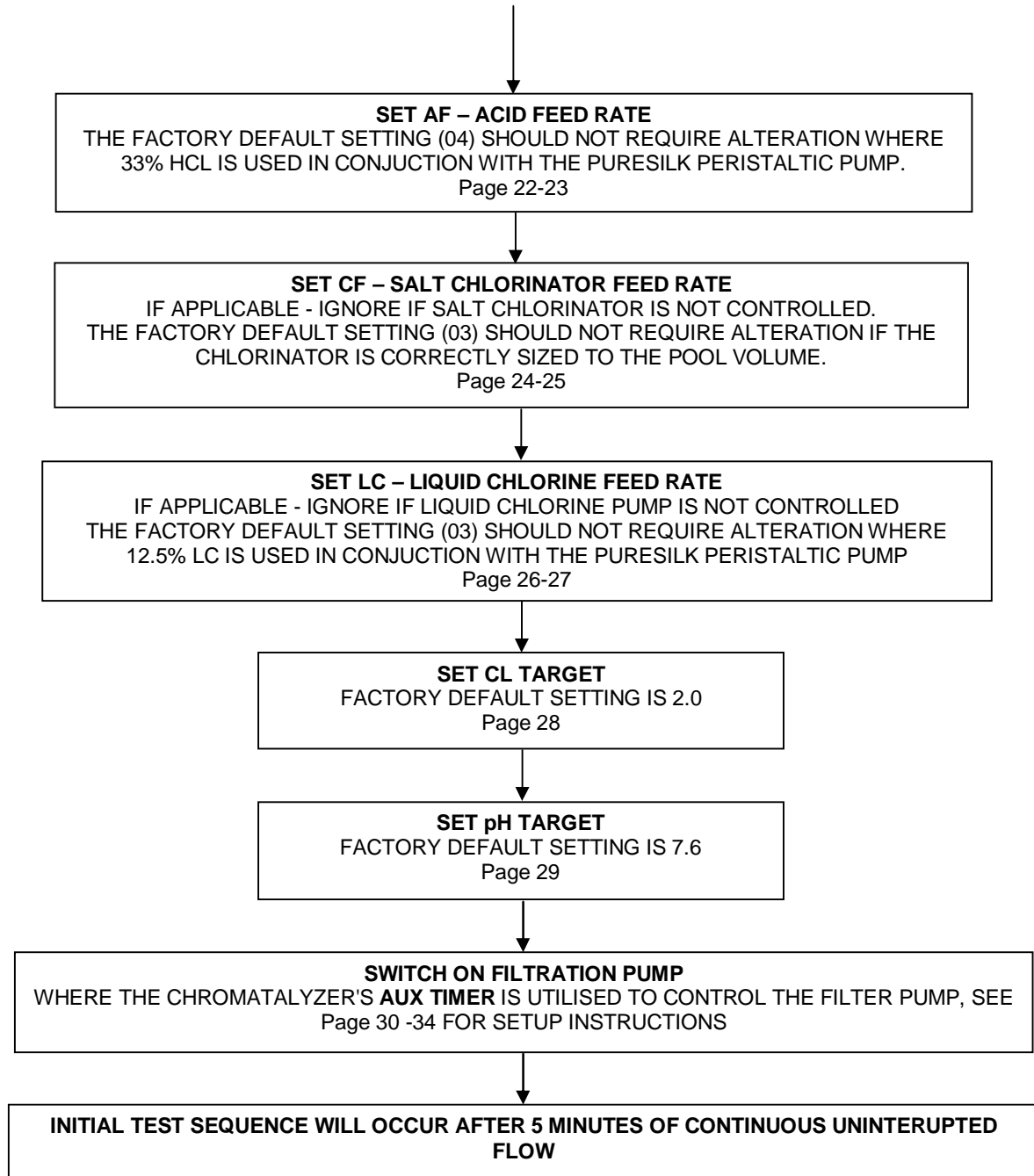
Please note: If a salt chlorinator is controlled, set the chlorinator output to maximum.

QUICK START CHECK LIST - PART 2

Proceed to install and start up the system in accordance with the flow chart below.
Tick each box as it is completed

Where the installation is NOT a Pool and Spa combination, simply ignore the Spa Volume and TS - Test Frequency Spa settings. These will not be active unless the optional Spa Switch has been installed.

CONTINUED FROM PART 1



INSTALLING PURESILK REAGENT BAGS

Warranty void if non genuine reagents are used

Replace bags when empty or after 6 months, which ever comes first

Always keep spare replacement bags and store in a cool, dark place

The contents of each bag is sufficient for 750 tests (Domestic models)

It is good practice to regularly check the contents of the installed bags to help anticipate when a new set of reagent bags will be required.

If a reagent bag is empty, a flashing warning light and an intermittent alarm will sound to alert the home owner of the condition.

IMPORTANT:

If one or more of the test reagent bags are empty, the Chromatalyzer will produce a test fault and be unable to perform tests to obtain real time data.

If this occurs, the Chromatalyzer automatically defaults to an assumption that the deviation from target is 0.1 for every scheduled test.

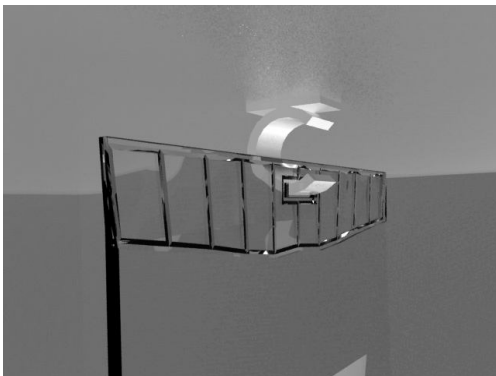
This ensures that even if the reagent bag is not replaced in a timely manner, a small chlorine output is maintained to help prevent the pool from going green.

REMOVING EMPTY REAGENT BAGS - PROCEDURE

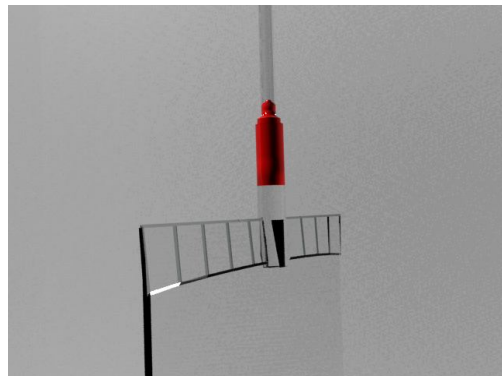
SWITCH CHROMATALYZER OFF

SWITCH FILTRATION PUMP OFF

1 - UNHOOK EMPTY BAG



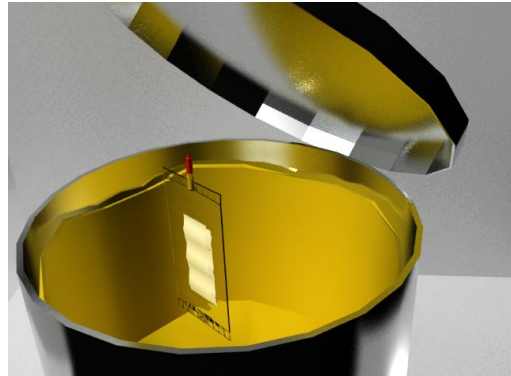
2 - HOLD TUBE CONNECTION UPPERMOST



3 - PULL TO REMOVE REAGENT FEED TUBE



4 - DISPOSE OF EMPTY BAG RESPONSIBLY



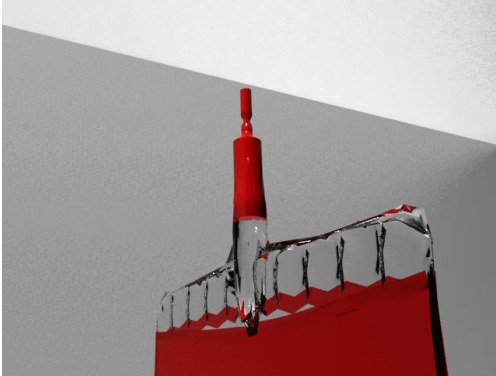
FIT NEW REAGENT BAGS
SEE PAGE 9

INSTALLING PURESILK REAGENT BAGS

FITTING NEW REAGENT BAGS - PROCEDURE

**REAGENT TUBES AND BAGS ARE COLOUR CODED
ALWAYS REPLACE WITH AN IDENTICAL COLOUR**

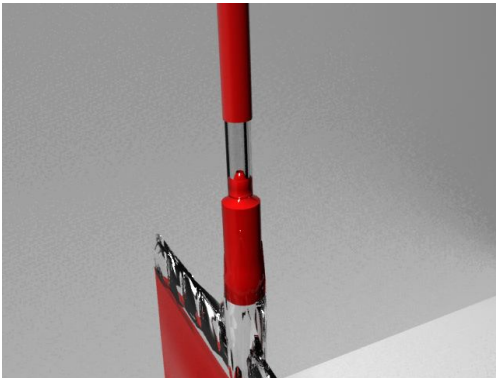
**1 - HOLD NEW BAG SUCH THAT TUBE
CONNECTOR IS UPPERMOST
DO NOT HOLD OR SQUEEZE BAG ITSELF**



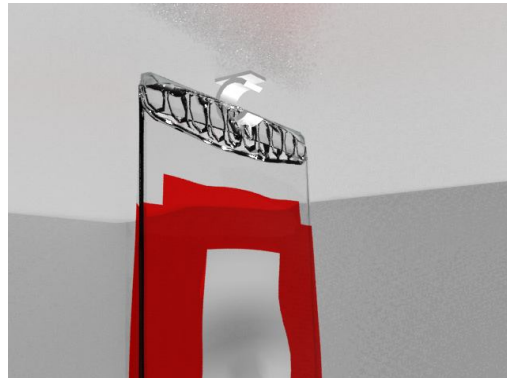
**2 - TO OPEN, HOLD THE END OF
CONNECTOR AND SNAP OFF TIP**



3 - PUSH TUBING ONTO CONNECTOR



4 - HANG NEW BAG ON HOOK



**SWITCH POWER ON TO CHROMATOLYZER
REAGENT FEED TUBES WILL AUTOMATICALLY PRIME
UNIT IS READY FOR OPERATION**

SWITCH FILTER PUMP ON

ACID RESERVOIR

SAFETY



Safety goggles, respirator and gloves suitable for use with hydrochloric acid must be used by persons handling the acid reservoir, feed and delivery system.



The Hydrochloric acid reservoir must be positioned in a secure location and in such a manner that access, especially to children is denied.

We recommend the use of industry standard, 15lt containers of 33% Hydrochloric Acid as the reservoir.

There is no need to dilute the acid as the peristaltic pump and tubing is suitable for use with 33% HCL.

The use of larger acid storage reservoirs for domestic pools is not recommended.

The use of a 15lt container acts as a physical safety limit for acid delivery.



Hydrochloric acid and its fumes are corrosive and dangerous to persons.

You must prevent the escape of HCL fumes in a confined environment or they may damage equipment, cause corrosion or be a danger to health.



The Puresilk Chromatalyzer contains a modified 15lt container cap which must be utilized. This red coloured cap allows air into the container to replace the acid pumped out but isolates the contents from the atmosphere to prevent fuming.

Cables ties must also be used to lock the cap to the container handle.

This will prevent unauthorised opening of the acid by children.

Check with your supplier for the availability of an acid safety storage container.

These help to prevent access to the acid container by children and act as a secondary safety and containment vessel.

Ensure the acid feed and delivery tubing is correctly, neatly and safely installed.



DO NOT MIX CHLORINE OR ANY OTHER CHEMICAL WITH HYDROCHLORIC ACID



DO NOT USE HYDROCHLORIC ACID ON A PERISTALTIC PUMP AND FEED SYSTEM INTENDED AND LABELLED FOR LIQUID CHLORINE USE.



DO NOT USE LIQUID CHLORINE ON A PERISTALTIC PUMP AND FEED SYSTEM INTENDED FOR HYDROCHLORIC ACID USE.

ACID RESERVOIR – CONTINUED

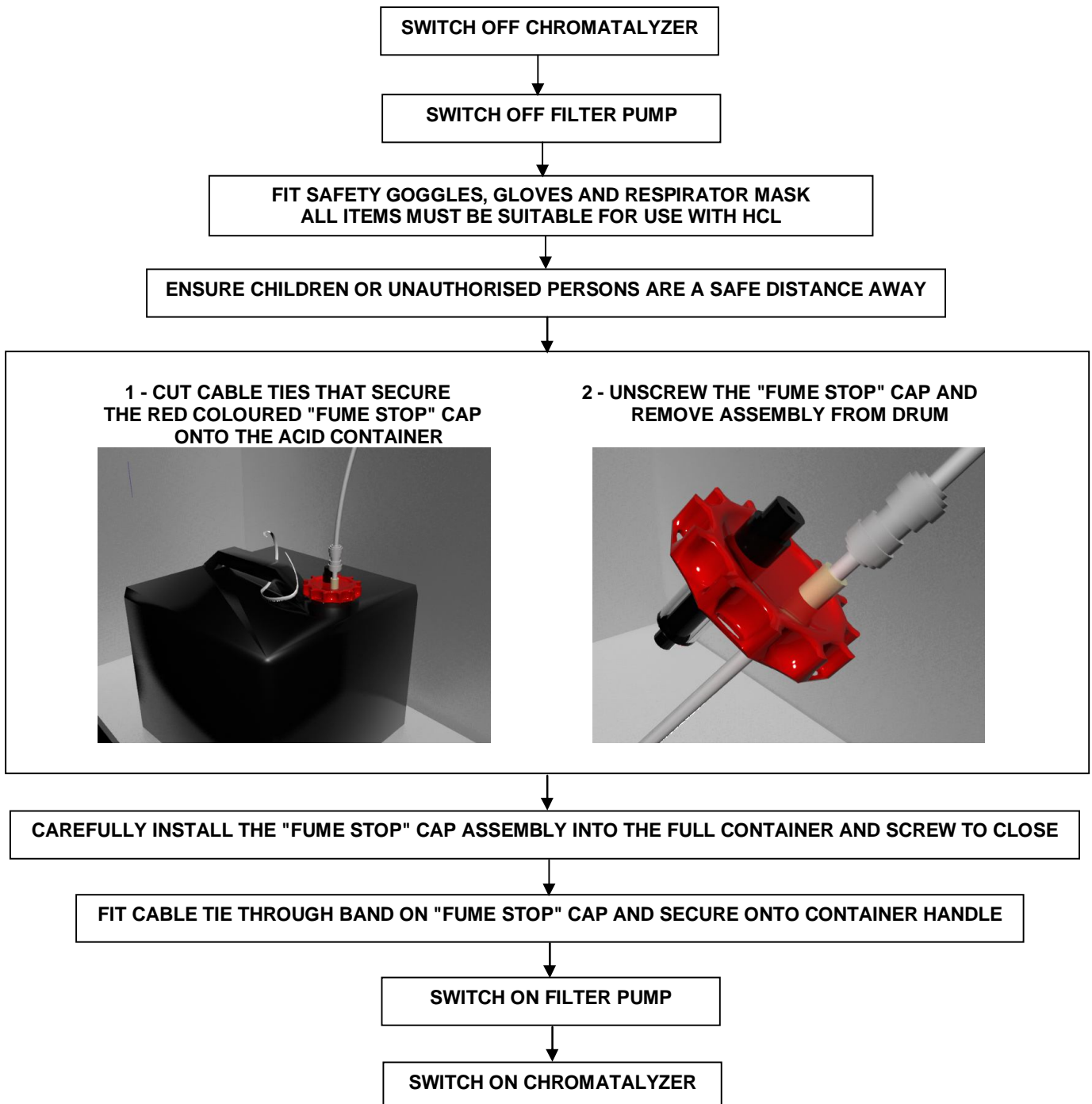
DOES THE ACID RESERVOIR REQUIRE REPLACEMENT?

Inspect your acid reservoir regularly to ensure you have sufficient volume at hand.

The Chromatalyzer will provide an intermittent audible warning and illuminate the check acid or feed rate if the pH target is not achieved within a 72hr period.

If the pH target is not hit within a 72hr period, the most likely reason is that the Acid Reservoir is empty. Check and replace.

EXCHANGE ACID RESERVOIR PROCEDURE



LIQUID CHLORINE RESERVOIR

CPS3 & COMM1000 ONLY

SAFETY

Safety goggles, respirator and gloves suitable for use with sodium hypochlorite must be used by persons handling the liquid chlorine reservoir, feed and delivery system.



Corrosive

The liquid chlorine reservoir must be positioned in a secure location and in such a manner that access, especially to children is denied. We recommend the use of industry standard, 15lt containers of 12.5% Sodium Hypochlorite as the reservoir. In some cases, the use of larger on-site storage containers may be more practical. There is no need to dilute the Liquid Chlorine as the peristaltic pump and tubing is suitable for use with 12.5% Sodium Hypochlorite.



Sodium Hypochlorite is corrosive and dangerous to persons. You must prevent leakage of this liquid or it may damage equipment, cause corrosion or be a danger to health.

The Puresilk Chromatalyzer contains a modified blue coloured 15lt container cap which must be utilised. This cap is know as the "LC CAP"

This "LC CAP" allows air into the container to replace the liquid pumped out and prevents air within from expanding and potentially rupturing the container.

Cables ties must also be used to lock the cap to the container handle. This will prevent unauthorised opening of the liquid chlorine by children.

Check with your supplier for the availability of a safety storage container. These help to prevent access to the chlorine container by children and act as a secondary safety and containment vessel.

Ensure the liquid chlorine feed and delivery tubing is correctly, neatly and safely installed.



DO NOT MIX CHLORINE OR ANY OTHER CHEMICAL WITH HYDROCHLORIC ACID



DO NOT USE HYDROCHLORIC ACID ON A PERISTALTIC PUMP AND FEED SYSTEM INTENDED AND LABELLED FOR LIQUID CHLORINE USE.



DO NOT USE LIQUID CHLORINE ON A PERISTALTIC PUMP AND FEED SYSTEM INTENDED FOR HYDROCHLORIC ACID USE.

LIQUID CHLORINE RESERVOIR – CONTINUED

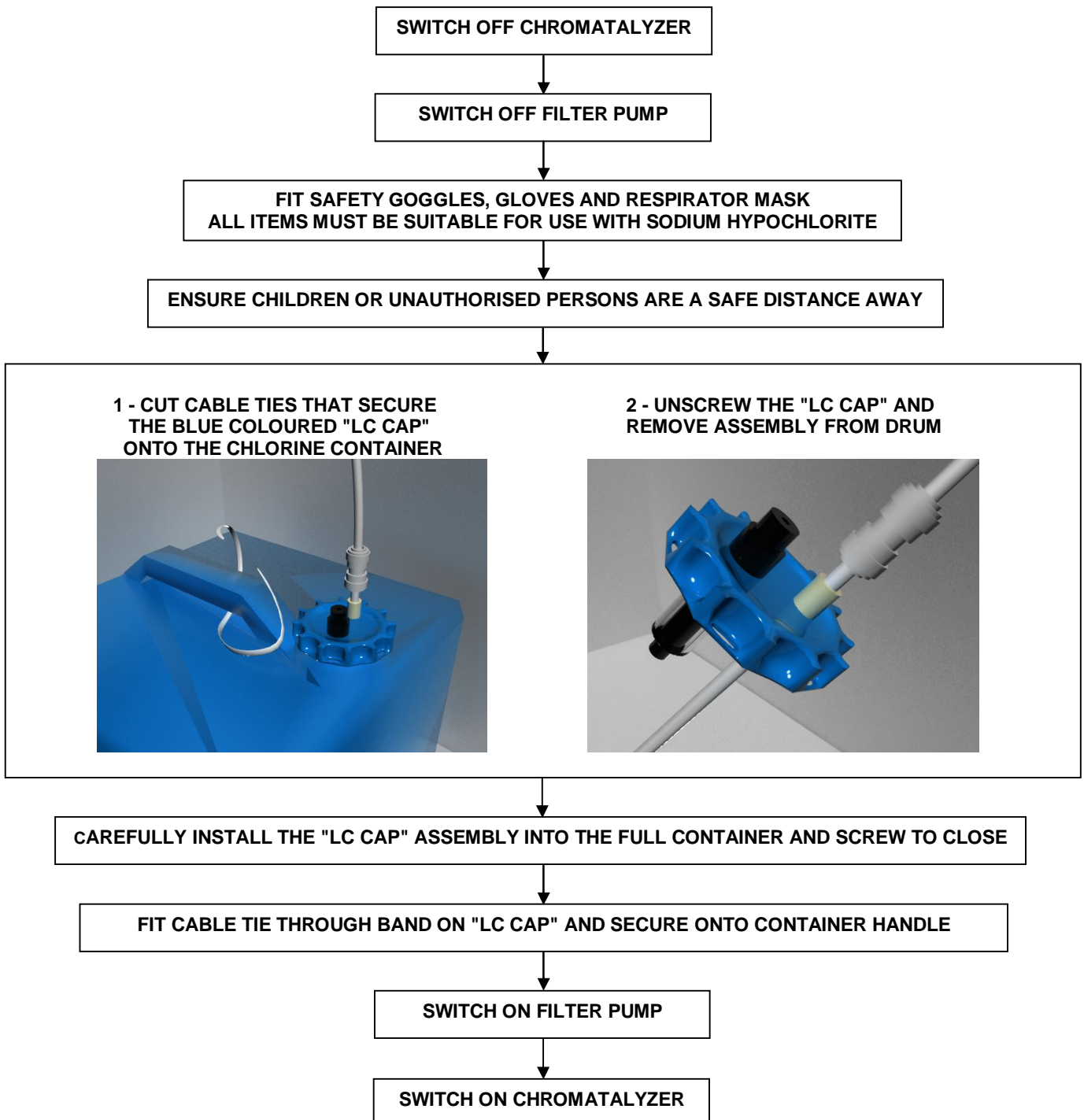
DOES THE LIQUID CHLORINE RESERVOIR REQUIRE REPLACEMENT?

Inspect your liquid chlorine reservoir regularly to ensure you have sufficient volume at hand.

The Chromatalyzer will provide an intermittent audible warning and illuminate the check CL or feed rate if the CL target is not achieved within a 72hr period.

If the CL target is not hit within a 72hr period, the most likely reason is that the Liquid Chlorine Reservoir is empty. Check and replace.

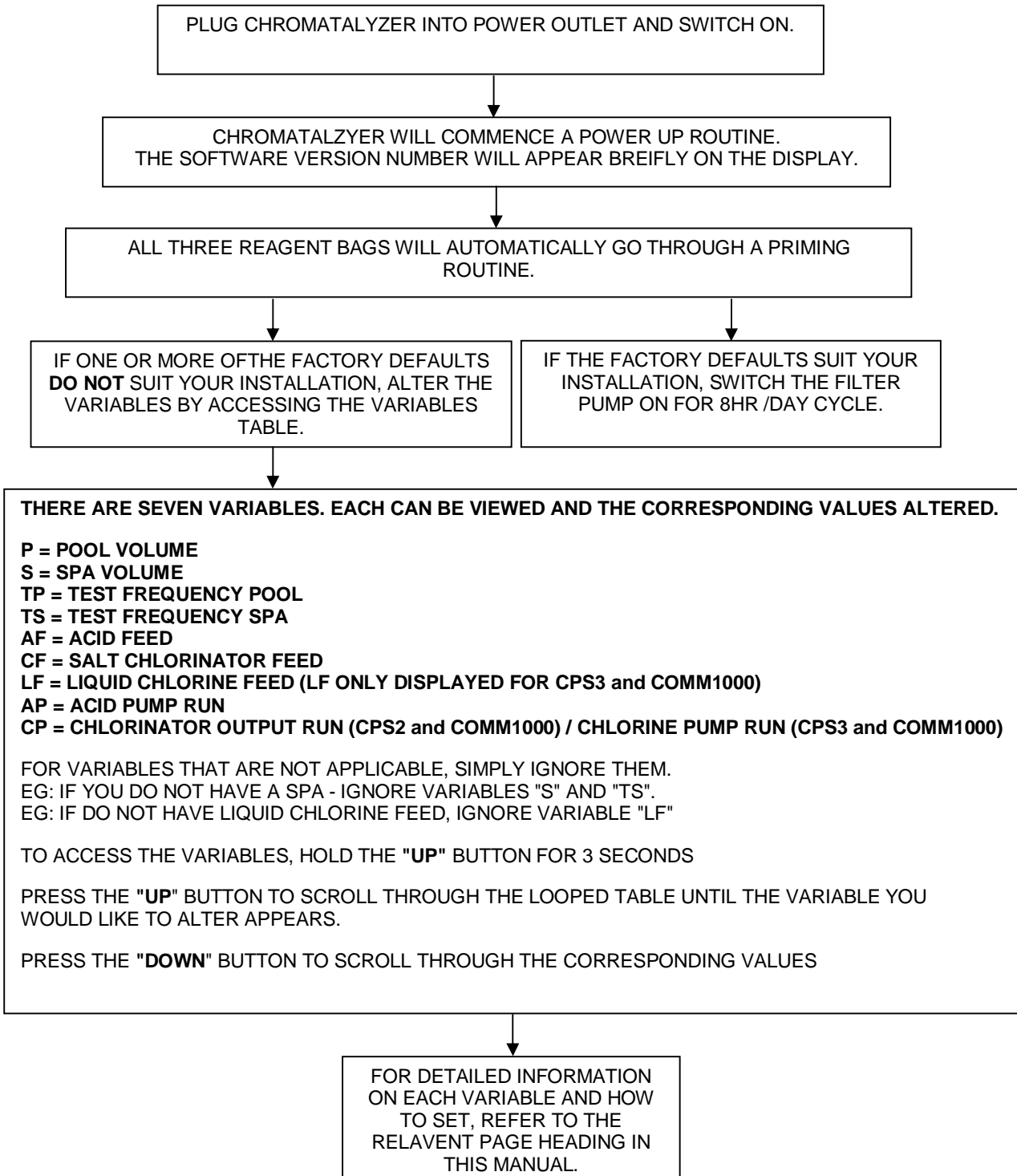
EXCHANGE LIQUID CHLORINE RESERVOIR PROCEDURE



CHROMATALYZER - FIRST TIME START UP

Ensure installation is in accordance with this manual and has been performed by persons qualified to do so.

DO NOT SWITCH THE CHROMATALZYER ON UNLESS THE FIRST FOUR STEPS OF THE QUICK SET UP GUIDE HAVE BEEN CORRECTLY COMPLETED.



SET POOL AND OR SPA VOLUME

Before operation, it is necessary to program the Pool and/or Spa volume into the Chromatalyzer. The unit performs both chlorine and acid dosage calculations based on the volume treated to hit set points.

The Chromatalyzer is pre-programmed with factory defaults of 50,000lts for Pools and 1,500lts for Spas. Although these are common values, you must alter them to best approximate your own Pool and or Spa volume.

The pre-set **Pool volumes** are listed below and correspond to volumes of zero, up to 999,000lts
0, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 120, 140, 160, 180, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 999.

The pre-set **Spa volumes** are listed below and correspond to volumes from zero up to 10,000lts
0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 6.0, 7.0, 8.0, 9.0, 10.

The numbers listed represent cubic metres of water.
Eg: The number 50 = 50 Cubic metres = 50,000lts

Please note: With spa only installations where the volume is less than 10,000lts,
Set the Pool Volume to zero - spa switch is not required.

With pool only installations where the volume is less than 10,000lts,
Set the Pool Volume to zero and operate pool as a spa - spa switch is not required.

Optional spa switch is required where pool and spa combinations exist.

PROCEDURE TO SET POOL VOLUME

HOLD THE "UP" BUTTON FOR 3 SECONDS.
"P" WILL BE DISPLAYED IN THE CL WINDOW.

THE CORRESPONDING VOLUME IN CUBIC METRES
WILL BE DISPLAYED IN THE pH WINDOW

PUSH THE **DOWN** BUTTON TO SCROLL THROUGH THE PRE-SET LIST OF POOL VOLUMES AND PICK THE ONE WHICH BEST APPROXIMATES THE POOL. IF EXACT VOLUME IS NOT LISTED, SET TO CLOSEST VOLUME **LESS** THAN ACTUAL VOLUME OF POOL.

WAIT 3 SECONDS FOR VALUE TO SET.

PROCEDURE TO SET SPA VOLUME

HOLD THE "UP" BUTTON FOR 3 SECONDS.
"P" WILL BE DISPLAYED IN THE CL WINDOW.

THE CORRESPONDING VOLUME IN CUBIC METRES
WILL BE DISPLAYED IN THE pH WINDOW

PUSH THE "UP" BUTTON ONCE.
"S" WILL BE DISPLAYED IN THE LHS CL WINDOW.

THE CORRESPONDING VOLUME IN CUBIC METRES
WILL BE DISPLAYED IN THE pH WINDOW.

PUSH THE **DOWN** BUTTON TO SCROLL THROUGH THE PRE-SET LIST OF SPA VOLUMES AND PICK THE ONE WHICH BEST APPROXIMATES THE SPA. IF EXACT VOLUME IS NOT LISTED, SET TO CLOSEST VOLUME **LESS** THAN ACTUAL VOLUME OF SPA.

WAIT 3 SECONDS FOR VALUE TO SET.

TP AND TS VARIABLES

Note: Optional Spa Switch **MUST BE** installed on Spa Suction line where a Pool and Spa combination installation exists.

Note: The daily filtration time **MUST NOT** be split into multiple periods.

TP = TEST FREQUENCY POOL

This term and its corresponding value refers to the time period between pool tests.

Setting the TP - Test Frequency Pool value is applicable for the following installations

Pool and Spa combinations

Pool only - where the volume is greater than 10,000lts

Spa only - where the volume is greater than 10,000lts - Volumes greater than 10,000lts are operated as Pools.

For domestic swimming pools operating a filter pump for 8hrs per day, the pre-programmed factory default test frequency is No.10 which corresponds to a test every 2 hours and 40 minutes.

The test frequency for this example is shown below.

You will see that the period after the last test is equal to the other periods.

This is important as it provides adequate time for the Chromatalzyer to complete any dosage requirements.

FILTER PUMP ON...CL/pH TEST.....CL/pH TEST.....CL/pH TEST.....FILTER PUMP OFF
TIME.....0 MIN.....5 MIN.....2HRS & 45MIN.....5HRS & 25MIN.....8HRS

The TP - Test Frequency Pool recommendations on page 20 ensure that you optimise the efficiency of the analysis and chemical delivery systems.

TS = TEST FREQUENCY SPA

This term and its corresponding value refers to the time period between spa tests.

Setting the TS - Test Frequency Spa value is applicable for the following installations:

Pool and spa combinations

Spa only installations

Pool only installations with a volume of less than 10,000lts - volumes less than 10,000lts are operated as spas.

For spa only installations, filtration times of 2hrs per day are common.

Refer to the guide on page 20 to select the appropriate TS value for 2hrs per day.

POOL AND SPA COMBINATIONS

Where a pool and spa combination exists, the optional spa switch must be installed on the spa suction line. The spa switch enables the Chromatalzyer to recognise when the spa only is being filtered and therefore choose the appropriate volume of water to treat.

When **spa mode** is recognised, an LED is illuminated on the control panel.

During **spa mode**, TS -Test Frequency Spa is automatically selected.

The increased test frequency ensures the rapidly changing Spa environment is adequately tested and treated.

During **spa mode**, the chlorine level and pH are affected by environmental factors and higher bather load ratios many times more quickly than during **pool mode**.

The higher test frequency enables the Chromatalzyer to react to a change in chlorine and pH levels and prevent them from drifting from the set targets.

During normal filtration of the pool and spa system, the spa suction line remains closed.

Water is drawn from the pool with a small portion or all of the water returning to the spa.

The excess water flows from the spa, back into the pool via pipes or an overflow.

This ensures that the water in both the pool and spa is being turned over and will not stagnate.

The spa suction line is opened when the spa **ONLY** is being filtered or heated for use.

The spa switch detects when the spa **ONLY** is being filtered and or heated.

When this occurs, the Chromatalzyer selects the TS variable which delivers a high test frequency in order to control the dynamic spa environment.

FOR POOL AND SPA COMBINATIONS - ALWAYS USE THE FACTORY DEFAULT FOR TS = 03

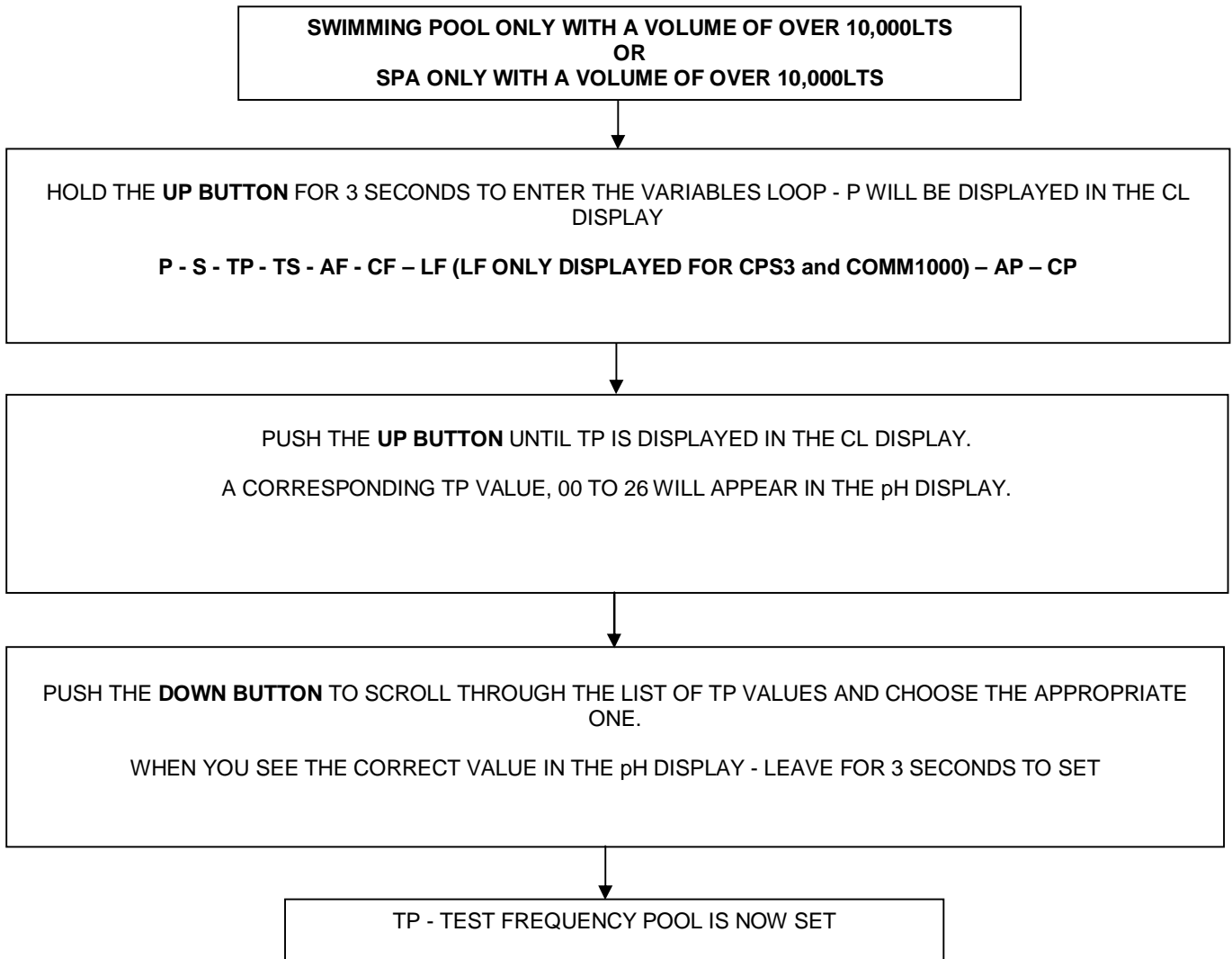
SET TP AND TS VARIABLES

Follow one of the three flow charts that best describes the installation format

FLOW CHART #1 - SWIMMING POOL ONLY WITH A VOLUME OVER 10,000LTS OR SPA ONLY WITH A VOLUME OVER 10,000LTS

Where increased or decreased testing frequencies are required, follow the procedure below to alter the frequencies to suit your application.

Before commencing this procedure, ensure you have determined the correct TP and or TS values from page 20 to synchronise with the daily filtration cycle time.



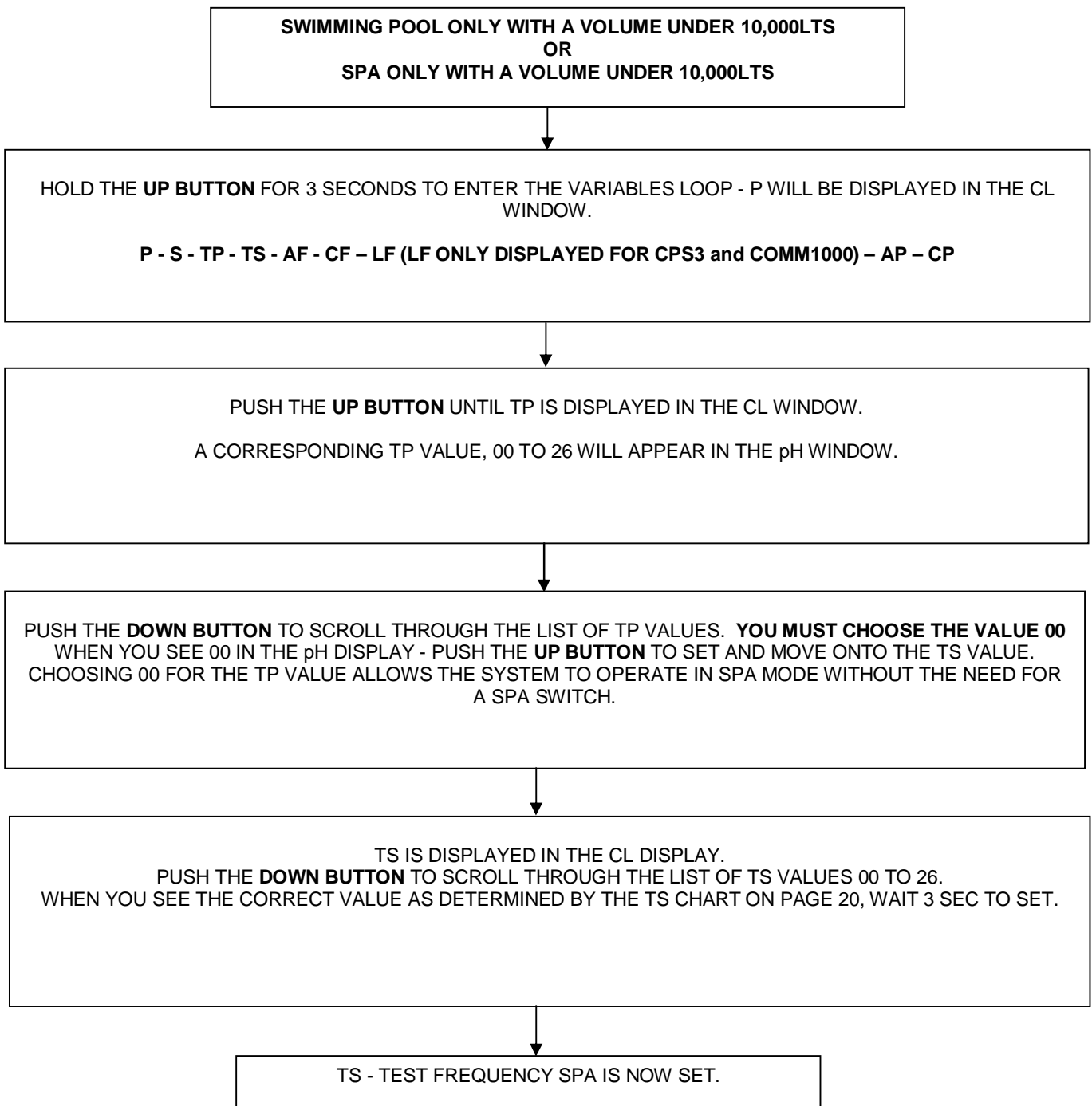
SET TP AND TS VARIABLES

FLOW CHART #2 - SWIMMING POOL ONLY WITH A VOLUME UNDER 10,000LTS OR SPA ONLY WITH A VOLUME UNDER 10,000LTS

Where increased or decreased testing frequencies are required, follow the procedure below to alter the frequencies to suit your application.

Before commencing this procedure, ensure you have determined the correct TP and or TS values from page 20 to synchronise with the daily filtration cycle time.

Please note: Swimming Pools with a volume of under 10,000lts will be considered and operated as Spas.

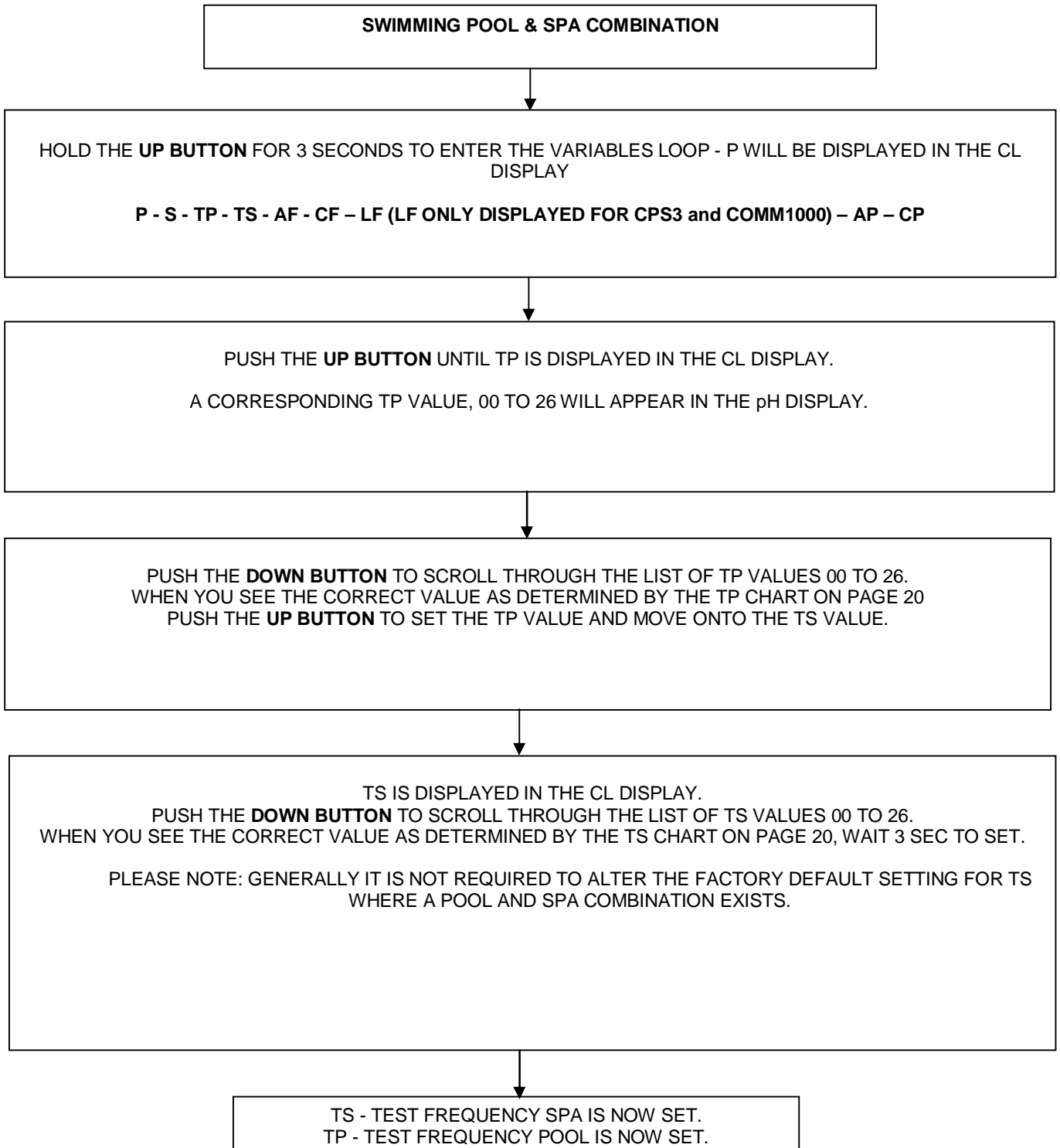


SET TP AND TS VARIABLES

FLOW CHART #3 - SWIMMING POOL & SPA COMBINATION

Where increased or decreased testing frequencies are required, follow the procedure below to alter the frequencies to suit your application.

Before commencing this procedure, ensure you have determined the correct TP and or TS values from page 20 to synchronise with the daily filtration cycle time.



TEST FREQUENCY VERSES DAILY FILTRATION TIME TABLES

For the average domestic Swimming Pool, three test sequences for chlorine and pH should be performed per day.

For the average domestic Spa not connected to a swimming pool, three test sequences for chlorine and pH should be performed per day.

It is important to synchronise the daily filtration time with the Test Frequency to avoid wasted tests and optimise the efficiency of the analysis and chemical delivery systems.

A wasted test sequence occurs when the filter pump switches off before the Chromalyzer has time to act on the results.

DO NOT SPLIT DAILY FILTER TIMES

DO NOT PROGRAM FILTER PUMP TO OPERATE MULTIPLE ON AND OFF TIMES PER DAY

OPERATE FILTER PUMP FOR A CONTINUOUS SINGLE PERIOD PER DAY

Where it is deemed three tests per day is insufficient such as in a commercial pool, the table on the following page may be utilised.

RECOMMENDED tP SETTINGS FOR 3 TESTS PER DAY

Filtration Cycle Time (hours)	Test Frequency	tP or tS setting
NO TESTS	OFF	00
¾ hour	15mins	01
1	20mins	02
1 ½	30mins	03 (Default tS setting)
2	40mins	04
3	1hr	05
4	1hr 20mins	06
5	1hr 40mins	07
6	2hrs	08
7	2hrs 20mins	09
8	2hrs 40mins	10 (Default tP setting)
9	3hrs	11
10	3hrs 20mins	12
11	3hrs 40mins	13
12	4hrs	14
13	4hrs 20mins	15
14	4hrs 40mins	16
15	5hrs	17
16	5hrs 20mins	18
17	5hrs 40mins	19
18	6hrs	20
19	6hrs 20mins	21
20	6hrs 40mins	22
21	7hrs	23
22	7hrs 20mins	24
23	7hrs 40mins	25
24	8hrs	26

POOL EG: If filter pump turns on at 9.00 and off at 17.00 (8hours) with the chromalyzer tP set to 10 (Default setting) there will be 3 tests done within this time – 1st Test at 9.05 / 2nd Test at 11.45 / 3rd Test at 14.25

SPA EG: If filter pump turns on at 9.00 and off at 10.30 (1.5hours) with the chromalyzer tS set to 03 (Default setting) there will be 3 tests done within this time – 1st Test at 9.05 / 2nd Test at 9.35 / 3rd Test at 10.05

NEED MORE THAN 3 TESTS SEQUENCES PER DAY?

USE THIS TABLE TO LOOK UP CORRESPONDING TP AND TS VALUES

Filter Pump Operating Hrs/day	3 Tests/Day	4 Tests/Day	5 Tests/Day	6 Tests/Day	8 Tests/Day
	TP or TS	TP or TS	TP or TS	TP or TS	TP or TS
ZERO TESTS	00	00	00	00	00
0.75hr	01				
1.0hr	02	02			
1.5hr	03				
2hr	04	04			
3hr	05				
4hr	06	06			
5hr	07	07	06		
6hr	08	08	07	06	
7hr	09	09	08	07	
8hr	10	09	08	07	06
9hr	11	10	09	08	07
10hr	12	11	09	08	07
11hr	13	12	10	09	
12hr	14	12	11	09	08
13hr	15	13	11	10	08
14hr	16	14	12	10	
15hr	17	14	12	11	
16hr	18	15	13	11	09
17hr	19	16	14	12	
18hr	20	17	14	12	10
19hr	21	18	15	13	
20hr	22	18	15	13	
21hr	23	19	16	14	11
22hr	24	20	17	14	
23hr	25	21	17	15	12
24hr	26	21	18	15	12

If more than 8 test sequences per daily filtration period is desired, divide the daily filtration time (minutes), by the desired number of tests per day

Compare the result with the actual test frequency time listed on page 20.

Choose the time and resultant TP or TS variable number that best approximates your calculated result.

SET ACID FEED - AF

The pre-programmed factory default AF value of "04" does not require alteration where a single Puresilk peristaltic pump is utilized with 33% Hydrochloric Acid.

The choice of feed rates is made available for adaptation where multiple acid feed pumps are being utilised or the 33% HCL is diluted prior to feed.

Co2 injection via a solenoid valve may also be controlled.

Acid is introduced into the pool and/or spa by the Chromatolyzer via various feed methods.

Standard systems utilize an inbuilt peristaltic pump to feed hydrochloric acid, although external pumps and CO2 injector systems may be used.

The built in peristaltic pump feeds approx 55ml per minute into a return line with a pressure of up to 250kpa. Acid is only fed if the pool flow switch indicates water flow ensuring the concentrate is diluted before it enters the pool or spa.

Acid feed may occur simultaneously with salt chlorinator operation.

Acid feed WILL NOT occur simultaneously with liquid chlorine feed for safety reasons.

A 30 second delay exists between the completion of a liquid chlorine feed and an acid feed.

An acid feed will stop if a spa switch is activated during a feed based on the pool volume. This ensures excessive acid is not fed into the smaller spa volume.

There are seven ACID FEED variables to choose from, but as explained, the factory default will rarely require alteration.

Each of these variables corresponds to a formula which calculates the acid volume required to correct the pH based on the pool or spa volume.

Each pool and or spa system has different environmental impacts and rates of change with respect to pH.

For this reason, if the factory set default of AF04 is feeding too much acid and overshooting the target, a lower feed rate may be chosen.

The calculations incorporate an algorithm which uses test data to alter the dosage calculations to best suit the acid demand in the pool or spa.

There are six AF - ACID FEED variables to choose from.

AF 00, AF 01, AF 02, AF 03, AF 04, AF 05

Each of these numbers corresponds to an ACID FEED calculation.

AF 00 - FEED OFF

AF 01 - 4 x Standard Delivery (1/4 strength acid, 8.25% HCL)

AF 02 - 3 x Standard Delivery (1/3 strength acid, 11% HCL)

AF 03 - 2 x Standard Delivery (1/2 strength acid, 16.5% HCL)

AF 04 - Standard Default Delivery (33% HCL)

AF 05 - Half Standard Delivery

The factory set default of **AF 04** is based on the requirements for the average domestic swimming pool and spa.

Where increased or decreased pH correction dosages are required, follow the procedure on page 23 to change an ACID FEED variable to suit your application.

SET AF - ACID FEED

PROCEDURE TO VIEW OR ALTER AF - ACID FEED VALUE

The pre-programmed factory default AF value of "03" does not require alteration where a single Puresilk peristaltic pump is utilized with 33% hydrochloric acid.

HOLD THE **UP BUTTON** FOR 3 SECONDS TO ENTER THE VARIABLES LOOP - P WILL BE DISPLAYED IN THE CL DISPLAY

P - S - TP - TS - AF - CF - LF (LF ONLY DISPLAYED FOR CPS3 and COMM1000) - AP - CP.

PUSH THE **UP BUTTON** UNTIL AF IS DISPLAYED IN THE CL DISPLAY.
A CORRESPONDING AF VALUE WILL APPEAR IN THE pH DISPLAY
AF00 - AF01 - AF02 - AF03 - AF04 - AF05.

PUSH THE **DOWN BUTTON** TO SCROLL THROUGH THE SIX AF VALUES.
WHEN YOU SEE THE VALUE YOU REQUIRE, WAIT 5 SECONDS AND IT WILL SET.

SET CF - CHLORINE FEED - SALT CHLORINATOR CONTROL

CPS2 AND COMM1000 MODELS ONLY

The pre-programmed factory default CF value of "03" WILL NOT require alteration where a salt chlorinator is installed and sized correctly to the pool volume.

Chlorine is introduced into the pool and/or spa by the Chromatalyzer via various feed methods. The CPS2 and COMM1000 switch a salt chlorinator on and off for various periods of time to meet the demand requirements of the pool and/or spa. The COMM1000 also utilizes an inbuilt peristaltic pump to feed sodium hypochlorite, although external pumps may be used.

The CF - Chlorine Feed Value relates to calculations that control the ON and OFF time of a salt chlorinator.

The salt chlorinator may simultaneously deliver chlorine whilst the peristaltic pump is delivering acid.

The salt chlorinator may simultaneously deliver chlorine whilst the peristaltic pump is delivering liquid chlorine (COMM1000 only).

There are nine CF - CHLORINE FEED values to choose from.

Each of these variables corresponds to a formula which calculates the chlorine volume required to hit the chlorine target based on the pool or spa volume. Each pool and/or spa system has different environmental impacts and rates of change with respect to chlorine demand. For this reason, if the factory set default "03" is feeding insufficient chlorine to hit the chlorine target or is overshooting and feeding too much chlorine, a greater or lower feed rate may be chosen.

There are nine CF - CHLORINE FEED values to choose from.
CF 00, CF 01, CF 02, CF 03, CF 04, CF 05, CF 06

Each of these numbers corresponds to a CHLORINE FEED calculation.

PureSilk Models	Third Party Chlorinators
CF00 – Chlorinator Feed OFF	OFF
CF01 – PS15, PS20LS, PS25	Less than 25 grams per hour
CF02 – PS30LS, PS35, PS40LS	Less than 40 grams per hour
CF03 – PS45, PS50LS (Default Setting)	Less than 50 grams per hour
<i>The following settings are generally for large or commercial systems only</i>	
CF04 – 2 x PS50LS	Less than 100 grams per hour
CF05 – 3 x PS50LS	Less than 150 grams per hour
CF06 – 4 x PS50LS	Less than 200 grams per hour
CF07 – 5 or 6 x PS50LS	Less than 300 grams per hour
CF08 – 7 or 8 x PS50LS	Less than 400 grams per hour

Factory set default for salt chlorinator control = **CF 03**
This is based on the requirements for the average domestic swimming pool and spa.

Where increased or decreased pH correction dosages are required, follow the procedure on page 25 to change CHLORINE FEED variable to suit your application.

SET CF - CHLORINE FEED

**SALT CHLORINATOR CONTROL ONLY
MODELS CPS2 AND COMM1000 ONLY**

PROCEDURE TO VIEW OR ALTER CF - CHLORINE FEED VALUE

The pre-programmed factory default CF value of "03" WILL NOT require alteration where a salt chlorinator is correctly sized to the pool volume.

HOLD THE **UP BUTTON** FOR 3 SECONDS TO ENTER THE VARIABLES LOOP - P WILL BE DISPLAYED IN THE CL DISPLAY
DISPLAY
P - S - TP - TS - AF - CF - LF (LF ONLY DISPLAYED FOR CPS3 and COMM1000) - AP - CP.

PUSH THE **UP BUTTON** UNTIL CF IS DISPLAYED IN THE CL DISPLAY.
A CORRESPONDING CF VALUE WILL APPEAR IN THE pH DISPLAY.

PUSH THE **DOWN BUTTON** TO SCROLL THROUGH THE SEVEN CF VALUES.
WHEN YOU SEE THE VALUE YOU REQUIRE, WAIT 5 SECONDS AND IT WILL SET.

SET LF - LIQUID CHLORINE FEED

CPS3 AND COMM1000 MODELS ONLY

The pre-programmed factory default value of "03" WILL NOT require alteration where a single Puresilk Chromatolyzer is installed and correctly sized to the pool volume.

The choice of feed rates is made available for adaptation where multiple chlorine feed pumps are being utilized or the 12.5% liquid chlorine is diluted prior to feed.

Chlorine erosion feeders may also be controlled with the LF value via solenoid valves.

Liquid chlorine is introduced into the pool and/or spa by the Chromatolyzer via various feed methods. Standard systems utilize an inbuilt peristaltic pump to feed liquid chlorine, although external pumps may be utilized.

The built in peristaltic pump feeds approx 55ml per minute into a return line with a pressure of up to 250kpa. Liquid chlorine is only fed if the pool flow switch indicates water flow ensuring the concentrate is diluted before it enters the pool or spa.

Liquid chlorine feed may occur simultaneously with salt chlorinator operation (COMM1000 ONLY).

Liquid chlorine feed WILL NOT occur simultaneously with acid feed for safety reasons.

A 30 second delay exists between the completion of a liquid chlorine feed and an acid feed.

A liquid chlorine feed will stop if a spa switch is activated during a feed based on the pool volume. This ensures excessive liquid chlorine is not fed into the smaller spa volume.

There are seven Liquid Chlorine FEED variables to choose from, but the factory default will rarely require alteration.

Each of these variables corresponds to a formula which calculates the liquid chlorine volume required to meet the demand based on the pool or spa volume.

Each pool and/or spa system has different environmental impacts and rates of change with respect to chlorine. For this reason, if the factory set default of LF03 is feeding an excess and overshooting the target, a lower feed rate may be chosen.

The calculations incorporate an algorithm which uses test data to alter the dosage calculations to best suit the chlorine demand in the pool or spa.

There are seven LF - LIQUID CHLORINE FEED variables to choose from.

LF 00, LF 01, LF 02, LF 03, LF 04, LF 05, LF 06

Each of these numbers corresponds to a LIQUID CHLORINE FEED calculation.

00 – Liquid Feed OFF

01 – 3 x Standard Delivery

02 – 1.5 x Standard Delivery

03 – Standard Default Delivery (For use with 12-13% Hypochlorite Solution)

04 – $\frac{3}{4}$ Standard Delivery

05 – $\frac{1}{2}$ Standard Delivery

06 - $\frac{1}{4}$ Standard Delivery

The factory set default of **LF 03** is based on the requirements for the average domestic swimming pool and spa.

Where the factory default of LF 03 is not suitable, follow the procedure on page 27 to change the LF - LIQUID CHLORINE FEED variable to suit your application.

SET LF - LIQUID CHLORINE FEED

MODELS CPS3 AND COMM1000 ONLY

PROCEDURE TO VIEW OR ALTER LF - LIQUID CHLORINE FEED VALUE

The pre-programmed factory default value of "03" **WILL NOT** require alteration where a single Puresilk Chromatolyzer is installed and correctly sized to the pool volume.

HOLD THE **UP BUTTON** FOR 3 SECONDS TO ENTER THE VARIABLES LOOP - P WILL BE DISPLAYED IN THE CL DISPLAY
DISPLAY
P - S - TP - TS - AF - CF – LF (LF ONLY DISPLAYED FOR CPS3 and COMM1000) – AP – CP.

PUSH THE **UP BUTTON** UNTIL LF IS DISPLAYED IN THE CL DISPLAY.
A CORRESPONDING CF VALUE WILL APPEAR IN THE pH DISPLAY.

PUSH THE **DOWN BUTTON** TO SCROLL THROUGH THE SEVEN LF VALUES.
WHEN YOU SEE THE VALUE YOU REQUIRE, WAIT 5 SECONDS AND IT WILL SET.

SET CHLORINE TARGET

The pre-programmed factory default setting for the Chlorine Target is 2.0 ppm.

Two parts per million is a free chlorine value that is widely accepted as a target for most domestic swimming pools.

Conditions in some swimming pools or spas may exist where the target must be set higher or lower.

Consult with your pool professional as to which target best suits your needs.

PROCEDURE TO VIEW OR ALTER CHLORINE TARGET

PUSH THE **UP BUTTON** ONCE TO VIEW THE FLASHING TARGET VALUE

TO ALTER FLASHING TARGET, PUSH THE **UP OR DOWN** BUTTONS - WAIT 3 SECONDS TO SET

Please note: Pool and spa equipment manufacturers may void warranties if free chlorine levels are maintained above 4.0ppm.
Consult with your pool professional.

SET pH TARGET

The pre-programmed factory default setting for the pH Target is 7.6

A pH value of 7.6 is widely accepted as a target for most domestic swimming pools. Conditions in some swimming pools or spas may exist where the target must be set higher or lower. Swimming pool interiors differ in the requirement for pH, some plaster type interiors may prefer a pH of 7.8 where some fibreglass pool manufacturers prefer the pH to remain at 7.2.

An important factor is the requirement to balance water as per the Langlier Index. In some areas where the tap water contains high calcium hardness levels, a lower pH than what is considered normal may have to be applied to prevent scale deposits.

Consult with your pool professional as to which target best suits your pool and/or spa as many factors must be taken into account.

PROCEDURE TO VIEW OR ALTER CHLORINE TARGET

PUSH THE **DOWN BUTTON** ONCE TO VIEW THE FLASHING TARGET VALUE.



TO ALTER FLASHING TARGET, PUSH THE **UP OR DOWN** BUTTONS - WAIT 3 SECONDS TO SET.

Please note: Pool and spa builders or manufacturers may void warranties if pH levels are not maintained in accordance with their instructions. Consult with your pool professional.

AUX TIME CLOCK

CPS2, CPS3 AND COMM1000 MODELS

The Aux Time Clock operates on a 24hr clock system where 00:00 is 12:00 midnight.

The Aux Time Clock controls a switched 240V socket at the base of the Chromatalzyer. Any 240V, 9.5A or less, appliance is suitable to be operated from this outlet.

The Aux Time Clock may be used to operate a filter pump

The Aux Time Clock may be used to operate an in-floor cleaning pump

In-floor cleaning pumps may operate within the time period of the filtration cycle or independent of the filtration cycle.

Using the Aux Time Clock to control the in-floor cleaning pump provides the option to operate it at any time, or if the INTERLOCK feature is set, specifically within the filtration cycle.

The Aux Time Clock may be used to operate a pressure cleaner pump.

Many pressure cleaning pumps draw water from the return line of the filtration system and operate for a limited time within the filtration cycle.

The pressure cleaning pump relies on the filter pump to supply it with water.

If the filter pump switches off or is switched off for backwashing, the pressure cleaner pump will run dry and damage will occur.

The Puresilk Aux Time Clock has the ability to INTERLOCK the 240V output so that it will not deliver power to the aux device unless the flow switch recognises flow.

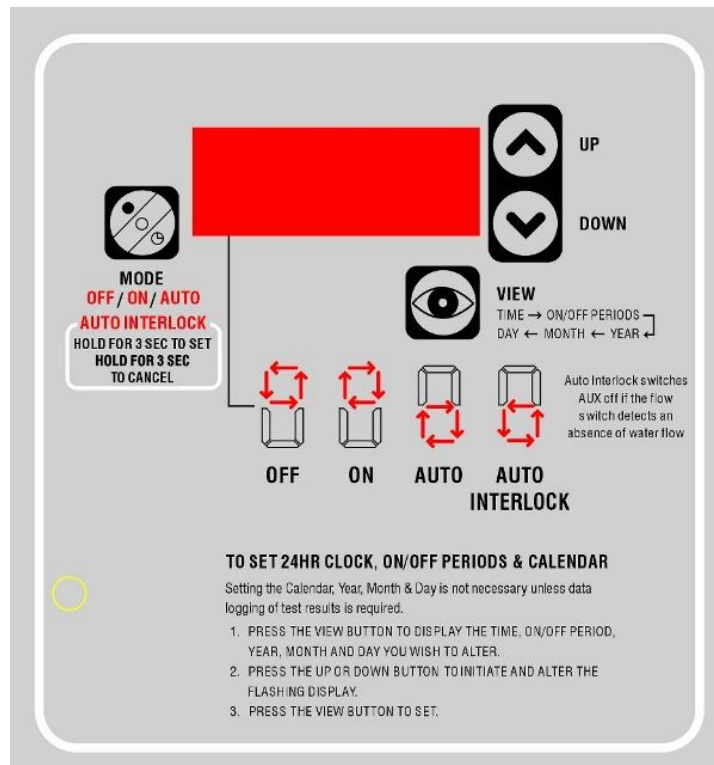
This feature uniquely protects the pressure cleaner pump from damage.

The Aux Time Clock may be used to provide TIME, DAY, MONTH AND YEAR details where optional data acquisition equipment is installed.

When is it necessary to log testing and operational data, the Aux Time Clock may be programmed so that Time, Day, Month and Year details appear alongside test data.

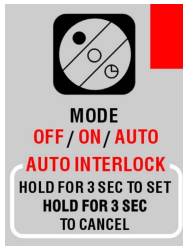
This data may be collected on a computer via a data cable or via a wireless modem.

See section on Data Acquisition.



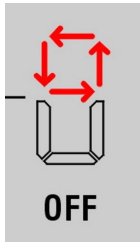
AUX TIME CLOCK

CPS2, CPS3 AND COMM1000 MODELS



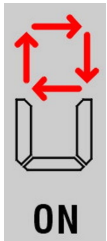
Press to select **ON**, **OFF**, **AUTO** or **AUTO INTERLOCK**

When **AUTO** mode is selected, the **ON/OFF** times you have set will switch the **240V AUX ON and OFF** on a daily basis.



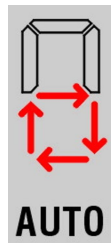
Indicted by way of the anti-clockwise rotation of the top portion of the first digit.

240V Aux will not supply power.



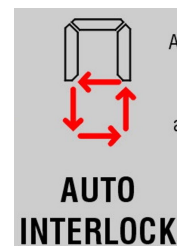
Indicted by way of the clockwise rotation of the top portion of the first digit.

240V Aux will continuously supply power .



Indicted by way of the clockwise rotation of the lower portion of the first digit.

When **AUTO** mode is selected, the **ON/OFF** times you have set will switch the **240V AUX ON and OFF** on a daily basis.



Indicted by way of the anti-clockwise rotation of the lower portion of the first digit.

When **AUTO INTERLOCK** mode is selected, the 240V Aux power is switched ON and OFF just as if it was in **AUTO** mode.

The difference is that if the Flow Switch detects a loss of water flow, the 240V Aux power will be switched OFF.



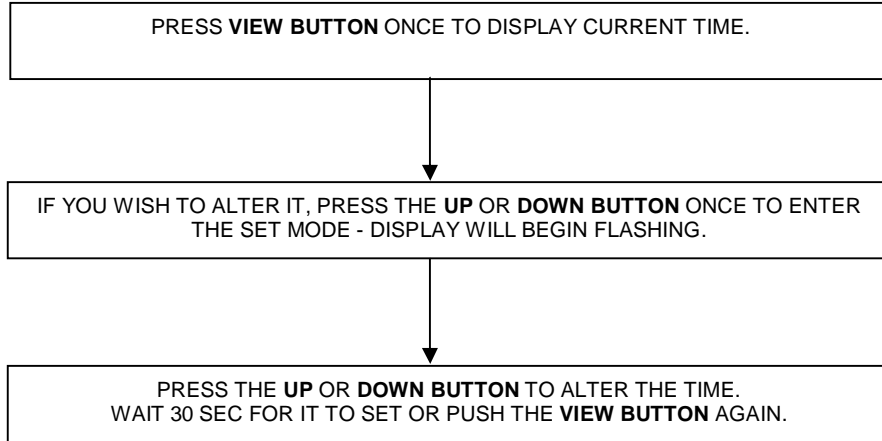
Press repeatedly to display, current **TIME**, **ON/OFF periods**, **DAY**, **MONTH** and **YEAR**.

Whilst a parameter is on the display, use the **UP** and **DOWN** buttons to alter.

AUX TIME CLOCK - SETTING GUIDE

CPS2, CPS3 AND COMM1000 MODELS

SET 24HR TIME CLOCK



The diagram shows a control panel with a red display screen. To the left of the screen is a **MODE** button with a dial icon, labeled **OFF / ON / AUTO** and **AUTO INTERLOCK**. Below it, text reads: **HOLD FOR 3 SEC TO SET** and **HOLD FOR 3 SEC TO CANCEL**. To the right of the screen are two buttons: **UP** (up arrow) and **DOWN** (down arrow). Below these is a **VIEW** button with an eye icon. To the right of the VIEW button, text reads: **TIME → ON/OFF PERIODS** and **DAY ← MONTH ← YEAR**. Below the buttons are four interlock switch positions: **OFF**, **ON**, **AUTO**, and **AUTO INTERLOCK**. To the right of these switches, text reads: **Auto Interlock switches AUX off if the flow switch detects an absence of water flow**.

TO SET 24HR CLOCK, ON/OFF PERIODS & CALENDAR

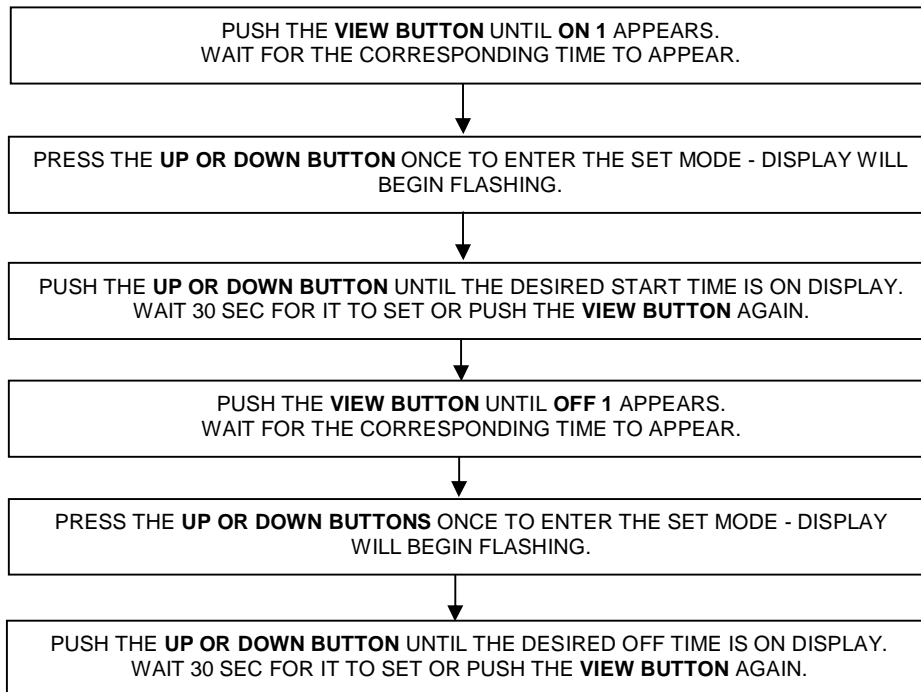
Setting the Calendar, Year, Month & Day is not necessary unless data logging of test results is required.

1. PRESS THE VIEW BUTTON TO DISPLAY THE TIME, ON/OFF PERIOD, YEAR, MONTH AND DAY YOU WISH TO ALTER.
2. PRESS THE UP OR DOWN BUTTON TO INITIATE AND ALTER THE FLASHING DISPLAY.
3. PRESS THE VIEW BUTTON TO SET.

AUX TIME CLOCK - SETTING GUIDE

CPS2, CPS3 AND COMM1000 MODELS

SET AUTO TIMER TO SWITCH AUX ON AND OFF ONCE PER DAY



MODE
OFF / ON / AUTO
AUTO INTERLOCK
HOLD FOR 3 SEC TO SET
HOLD FOR 3 SEC
TO CANCEL

VIEW
TIME → ON/OFF PERIODS
DAY ← MONTH ← YEAR

UP
DOWN

OFF **ON** **AUTO** **AUTO INTERLOCK**

Auto Interlock switches AUX off if the flow switch detects an absence of water flow

TO SET 24HR CLOCK, ON/OFF PERIODS & CALENDAR
Setting the Calendar, Year, Month & Day is not necessary unless data logging of test results is required.

1. PRESS THE VIEW BUTTON TO DISPLAY THE TIME, ON/OFF PERIOD, YEAR, MONTH AND DAY YOU WISH TO ALTER.
2. PRESS THE UP OR DOWN BUTTON TO INITIATE AND ALTER THE FLASHING DISPLAY.
3. PRESS THE VIEW BUTTON TO SET.

AUX TIME CLOCK - SETTING GUIDE

CPS2, CPS3 AND COMM1000 MODELS

SET CALENDER - DAY, MONTH AND YEAR

PUSH THE VIEW BUTTON UNTIL **OFF 04** APPEARS AND THEN PUSH IT ONCE MORE.
2011 WILL APPEAR IN THE DISPLAY - USE THE **UP** OR **DOWN** BUTTONS TO ADJUST YEAR.

PUSH THE **VIEW BUTTON** AGAIN TO SET YEAR, THEN PUSH **VIEW BUTTON** AGAIN TO DISPLAY THE MONTH.
USE THE **UP** OR **DOWN** BUTTONS TO ADJUST THE MONTH.

PUSH THE **VIEW BUTTON** AGAIN TO SET MONTH, THEN PUSH **VIEW BUTTON** AGAIN TO DISPLAY THE DAY.
USE THE **UP** OR **DOWN** BUTTONS TO ADJUST THE DAY.
PUSH THE **VIEW BUTTON** AGAIN TO SET DAY.
WAIT FOR 5 SECONDS - DISPLAY WILL REVERT TO CLOCK DISPLAY.

MODE
OFF / ON / AUTO
AUTO INTERLOCK
HOLD FOR 3 SEC TO SET
HOLD FOR 3 SEC
TO CANCEL

VIEW
TIME → ON/OFF PERIODS
DAY ← MONTH ← YEAR

UP
DOWN

Auto Interlock switches
AUX off if the flow
switch detects an
absence of water flow

OFF **ON** **AUTO** **AUTO INTERLOCK**

TO SET 24HR CLOCK, ON/OFF PERIODS & CALENDAR

Setting the Calendar, Year, Month & Day is not necessary unless data logging of test results is required.

1. PRESS THE VIEW BUTTON TO DISPLAY THE TIME, ON/OFF PERIOD, YEAR, MONTH AND DAY YOU WISH TO ALTER.
2. PRESS THE UP OR DOWN BUTTON TO INITIATE AND ALTER THE FLASHING DISPLAY.
3. PRESS THE VIEW BUTTON TO SET.

PERISTALTIC PUMP MAINTENANCE

REPLACE PERISTALTIC PUMP SQUEEZE TUBE EVERY 12 MONTHS



DO NOT allow children or unqualified persons to operate or perform any maintenance on this device.

DO NOT allow children or unqualified persons access to the chemical dosage equipment, storage drums, feed tubes, chemical pumps or injection sites.

YOU MUST wear protective eye goggles, suitable acid and chlorine resistant gloves and respirator when fitting, filling, servicing or exchanging both solid and/or liquid chemical dosage systems and storage reservoirs.



DO NOT use acid and/or chlorine types that are NOT specified by Puresilk.

DO NOT add chlorine to acid or acid to chlorine.

DO NOT add water into hydrochloric acid.



DO NOT use NON-GENUINE replacement parts or fitting.

YOU MUST ensure acid and chlorine supply and feed tubes are correctly and neatly installed.

A neat and tidy installation will prevent dangerous accidents from occurring.

Peristaltic Pump Maintenance

The Puresilk peristaltic pump is fitted with a santoprene squeeze tube which is suitable for 33% hydrochloric acid and 12.5% sodium hypochlorite.

A split and leaking tube may be dangerous to persons and will damage equipment.

Pro-active maintenance will ensure trouble free operation and peace of mind.

It is recommended that an authorised service professional perform this maintenance however the homeowner may replace the tube if all safety precautions are undertaken.

PERISTALTIC PUMP SQUEEZE TUBE REPLACEMENT PROCEDURE

Ensure squeeze tube is flushed with water before replacing

HOLD THE **UP BUTTON** FOR 3 SECONDS TO ENTER THE VARIABLES LOOP - P WILL BE DISPLAYED IN THE CL DISPLAY
P - S - TP - TS - AF - CF - LF (LF ONLY DISPLAYED FOR CPS3 and COMM1000) - AP - CP.

PUSH THE **UP BUTTON** UNTIL AP (ACID PUMP) OR CP (CHLORINE PUMP) IS DISPLAYED IN THE CL DISPLAY AND 00 WILL APPEAR IN THE pH DISPLAY

DISCONNECT FEED TUBING FROM ACID OR CHLORINE CAP ASS"Y AND PLACE INTO FRESH WATER

PRESS **DOWN BUTTON** TO FLUSH FEED TUBING AND SQUEEZE TUBE
00 IN pH DISPLAY WILL COUNT DOWN FROM 60 TO 00
NOTE: FILTER PUMP MUST BE RUNNING WITH FLOW STAND-BY LIGHT OFF

REPEAT TWICE TO ENSURE LINE IS FULLY FLUSHED

PERISTALTIC PUMP

1 - UN-SCREW BLACK NUTS



2 - UN-SCREW COVER



3 - REPLACE SQUEEZE TUBE

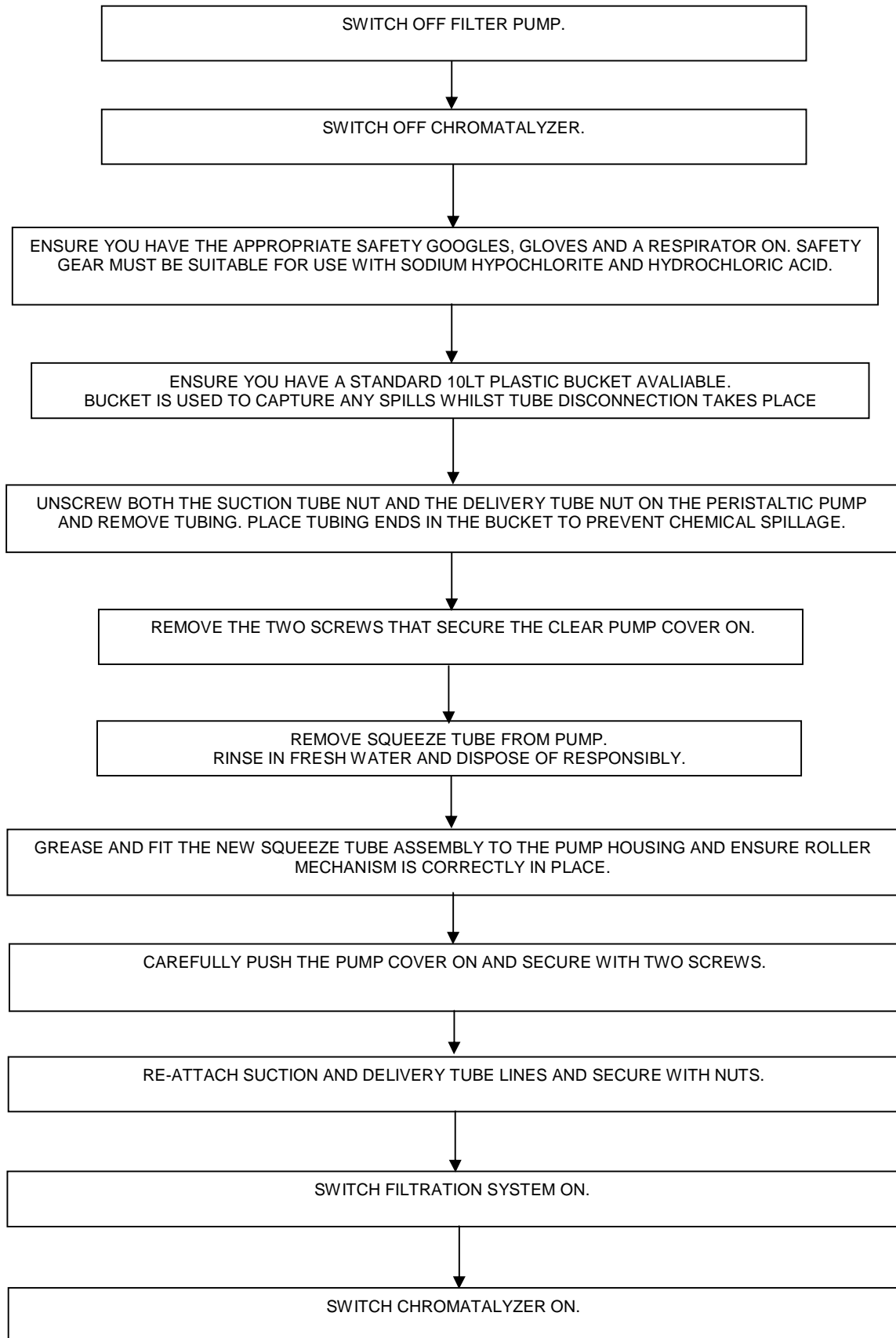


4 - PUMP COMPLETE



PERISTALTIC PUMP SQUEEZE TUBE REPLACEMENT PROCEDURE

Ensure squeeze tube is replaced every 12months



INSTALLATION GUIDE

YOU MUST read the entire manual before continuing with the installation.
YOU MUST ensure suitably qualified persons are performing the installation.
WARNING – DO NOT REMOVE JUNCTION BOX PANEL OR MAIN CONTROL PANEL.
High voltage components must be wired or serviced by electrically qualified persons.

Puresilk Chromatalyzers - CPS2, CPS3 and COMM1000.

Refer to contents list on page 53 to check and familiarise yourself with the names of items provided.

See page 45 for direct wiring instructions for countries where this is required – USA, CANADA, EUROPE, ASIA.

Puresilk Chromatalyzer Installation Guide

The Puresilk Chromatalyzer is suitable for indoor and outdoor installation and has an IP23 rating. As defined in AS3000 section G.3., the unit must be installed either 1.2m higher than the highest water level or at least 3m from the pool edge.

The unit must be installed within 2 metres of a suitable 240V power outlet – DO NOT USE EXTENSION LEADS.

The unit must be mounted using the mounting bracket kit provided on a solid wall or post.

Always mount the power pack as per local electrical codes.

Air flow around the power supply must not be restricted or warmed from a heat source.

Do not mount where sprinkler or other irrigation systems are likely to spray water onto the underside of the device.

Ensure the Chromatalyzer is mounted at a distance from the **sample switch** such that both the **water sample tubing** and **sample switch cable** will reach and attach to the Chromatalyzer in a neat and secure manner.

Length of **water sample tube** - 2 metres.

Length of **flow switch cable** – 2 metres.

Please note: **DO NOT extend the length of the water sample tubing.**

DO NOT use an alternative water sample tubing other than that supplied.

DO ensure the water sample tubing is contained with the flexible conduit provided.

Do ensure the flexible conduit is positioned neat and securely with cables ties.

If the Chromatalyzer is not able to be mounted close enough to the return water line so that the water sample tubing will reach, YOU MUST install a water bypass.

Where a pool and spa combination exists, ensure the Chromatalyzer is mounted at a distance from the **spa switch** such that the cable will reach and plug into the Chromatalyzer in a neat and secure manner.

Length of **spa switch cable** - 3.2 metres.

Ensure the Chromatalyzer is mounted at a distance from the Puresilk salt chlorinator such that the **PS control cable** will reach and attach to the Chromatalyzer in a neat and secure manner.

Length of **PS control cable** - 1.2 metres.

Ensure the Chromatalyzer is mounted at a distance from acid and/or chlorine injector such that the **acid and/or chlorine delivery tubing** will reach and attach in a neat and secure manner.

Length of **acid delivery and/or chlorine delivery tubing** - 2.5 metres

Ensure the Chromatalyzer is mounted at a distance from the acid and/or chlorine reservoirs such that the **acid and/or chlorine delivery tubing** will reach and attach in a neat and secure manner.

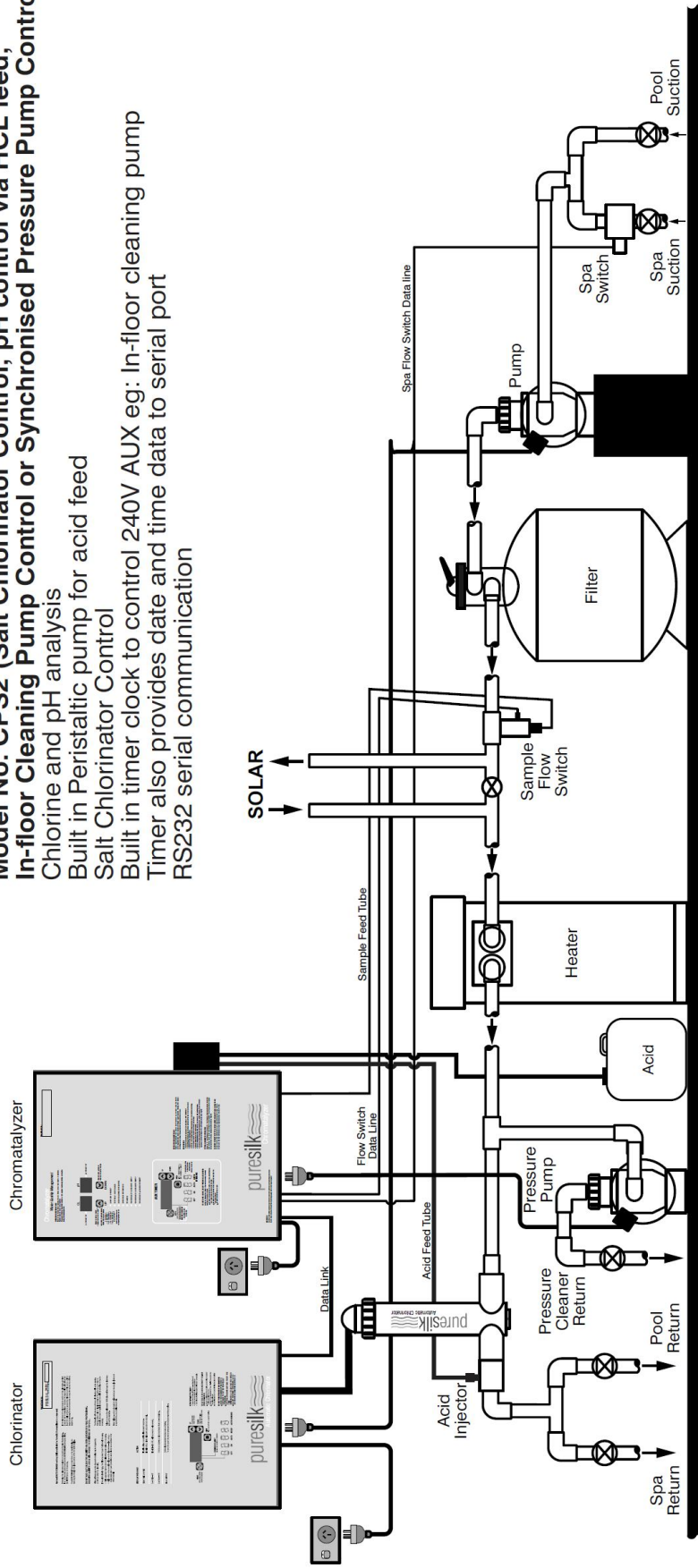
Length of **acid delivery tubing** – 2.5 metres

Length of **chlorine delivery tubing** – 2.5 metres

If the Chromatalyzer contains an AUX TIME CLOCK, ensure the 240V AUX appliance will reach the AUX power socket contained in the base.

Spa and Pool Combination

Model No. CPS2 (Salt Chlorinator Control, pH control via HCL feed, In-floor Cleaning Pump Control or Synchronised Pressure Pump Control)
 Chlorine and pH analysis
 Built in Peristaltic pump for acid feed
 Salt Chlorinator Control
 Built in timer clock to control 240V AUX eg: In-floor cleaning pump
 Timer also provides date and time data to serial port
 RS232 serial communication



This diagram illustrates an installation for a pool and spa combination. If the application is on a pool only or a spa only, the spa flow switch is not required. The spa flow switch is only applicable when a system has the option of switching between two different bodies of water.

Please Note: Plumbing diagrams are intended to illustrate installation positions of PureSilk equipment relative to other pool equipment only. Specific valve requirements will depend on the pools requirements and ancillary equipment.

It is important that the Sample Flow Switch is orientated vertically downwards as per the diagram. This prevents bubbles from entering sample feed line.

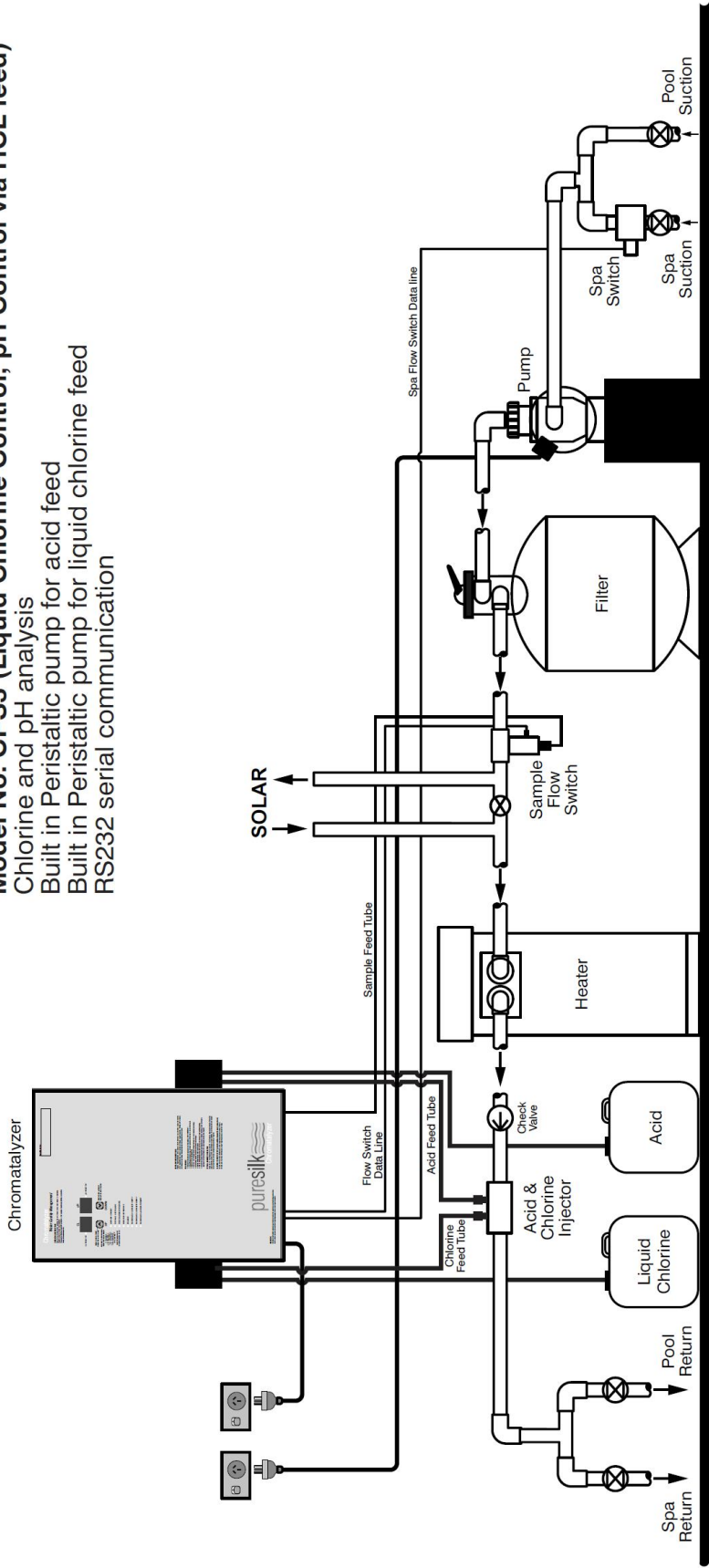
This Plumbing Diagram illustrates use of the AUX TIME CLOCK and AUTO INTERLOCK feature to control a pool cleaner Pressure Pump. The AUTO INTERLOCK prevents the Cleaner Pump from running dry or causing a damaging vacuum. Alternatively the AUX TIME CLOCK can be used to control an IN-FLOOR CLEANING PUMP with or without utilizing the AUTO INTERLOCK feature.

CPS-2

Spa and Pool Combination

Model No. CPS3 (Liquid Chlorine Control, pH Control via HCL feed)

Chlorine and pH analysis
 Built in Peristaltic pump for acid feed
 Built in Peristaltic pump for liquid chlorine feed
 RS232 serial communication



This diagram illustrates an installation for a pool and spa combination. If the application is on a pool only or a spa only, the spa flow switch is not required. The spa flow switch is only applicable when a system has the option of switching between two different bodies of water.

It is important that the Sample Flow Switch is orientated vertically downwards as per the diagram. This prevents bubbles from entering sample feed line.

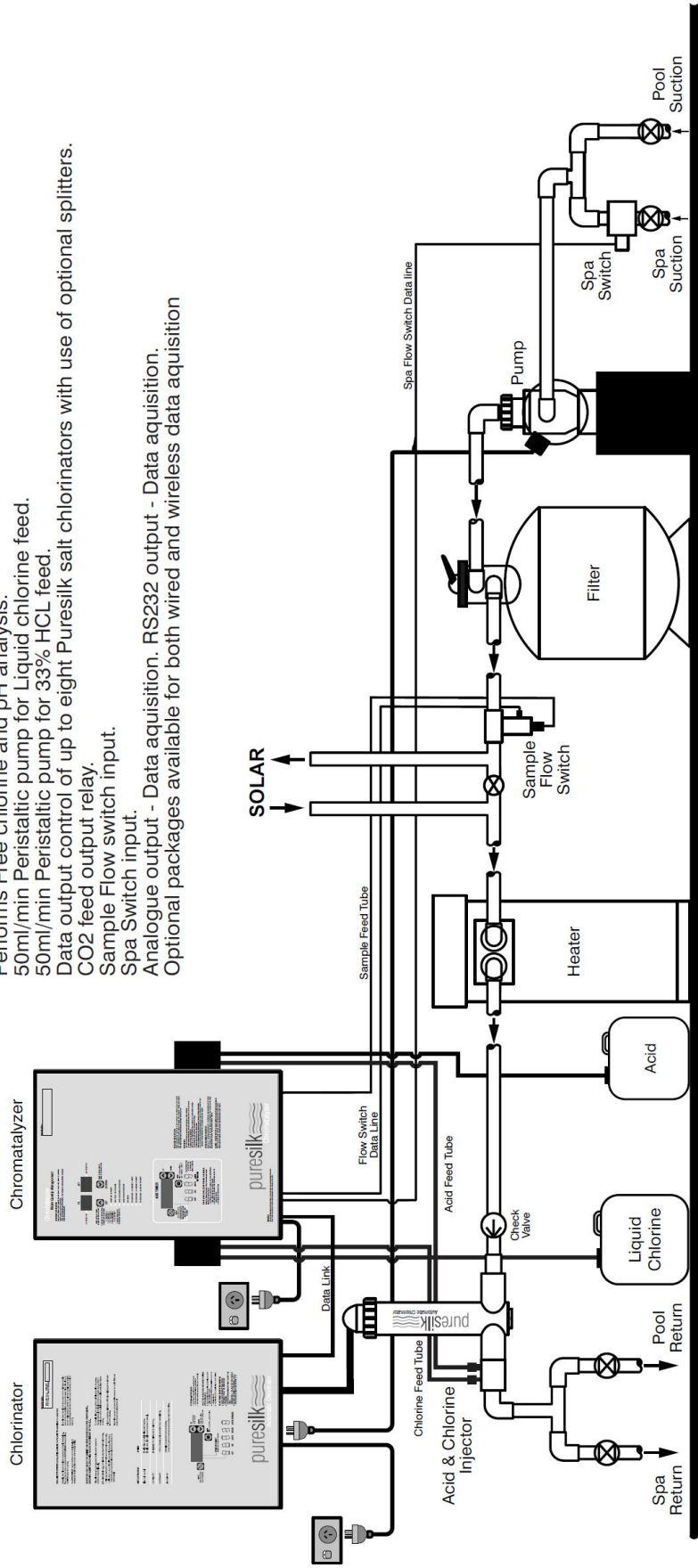
Please Note: Plumbing diagrams are intended to illustrate installation positions of PureSik equipment relative to other pool equipment only. Specific valve requirements will depend on the pools requirements and ancillary equipment.

CPS-3

COMM1000 with RDR

RDR - Rapid Demand Recovery

The COMM1000 utilizes Salt chlorinators to meet the average chlorine demand on the pool. The RDR system initiates liquid chlorine feed if the Chlorine test value falls to less than or equal to 70% of the target. Performs Free chlorine and pH analysis. 50ml/min Peristaltic pump for Liquid chlorine feed. Data output control of up to eight Puresik salt chlorinators with use of optional splitters. CO2 feed output relay. Sample Flow switch input. Spa Switch input. Analogue output - Data acquisition. RS232 output - Data acquisition. Optional packages available for both wired and wireless data acquisition



This diagram illustrates an installation for a pool and spa combination. If the application is on a pool only or a spa only, the spa flow switch is not required. The spa flow switch is only applicable when a system has the option of switching between two different bodies of water.

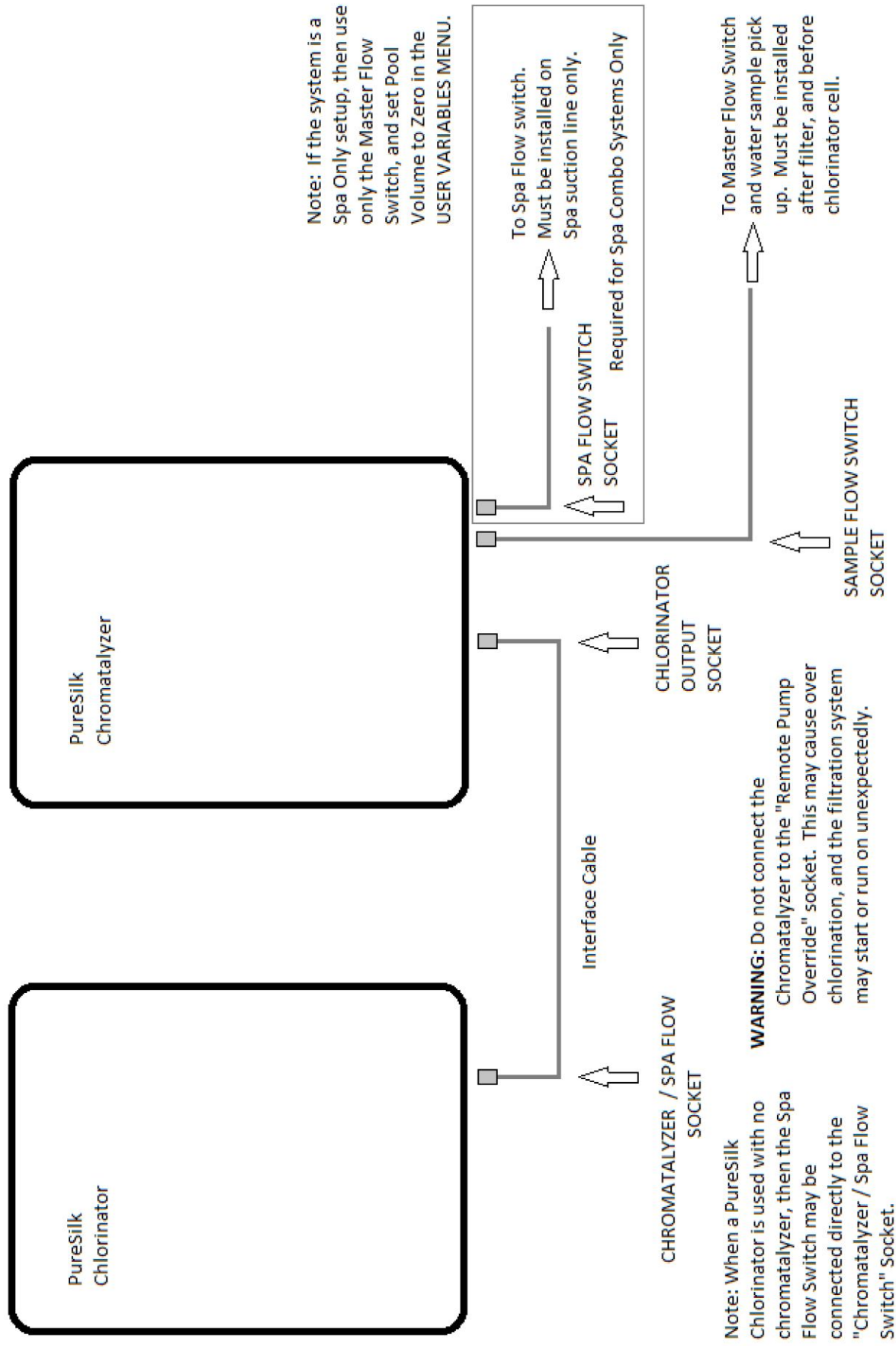
Please Note: Plumbing diagrams are intended to illustrate installation positions of PureSik equipment relative to other pool equipment only. Specific valve requirements will depend on the pools requirements and ancillary equipment.

It is important that the Sample Flow Switch is orientated vertically downwards as per the diagram. This prevents bubbles from entering sample feed line.

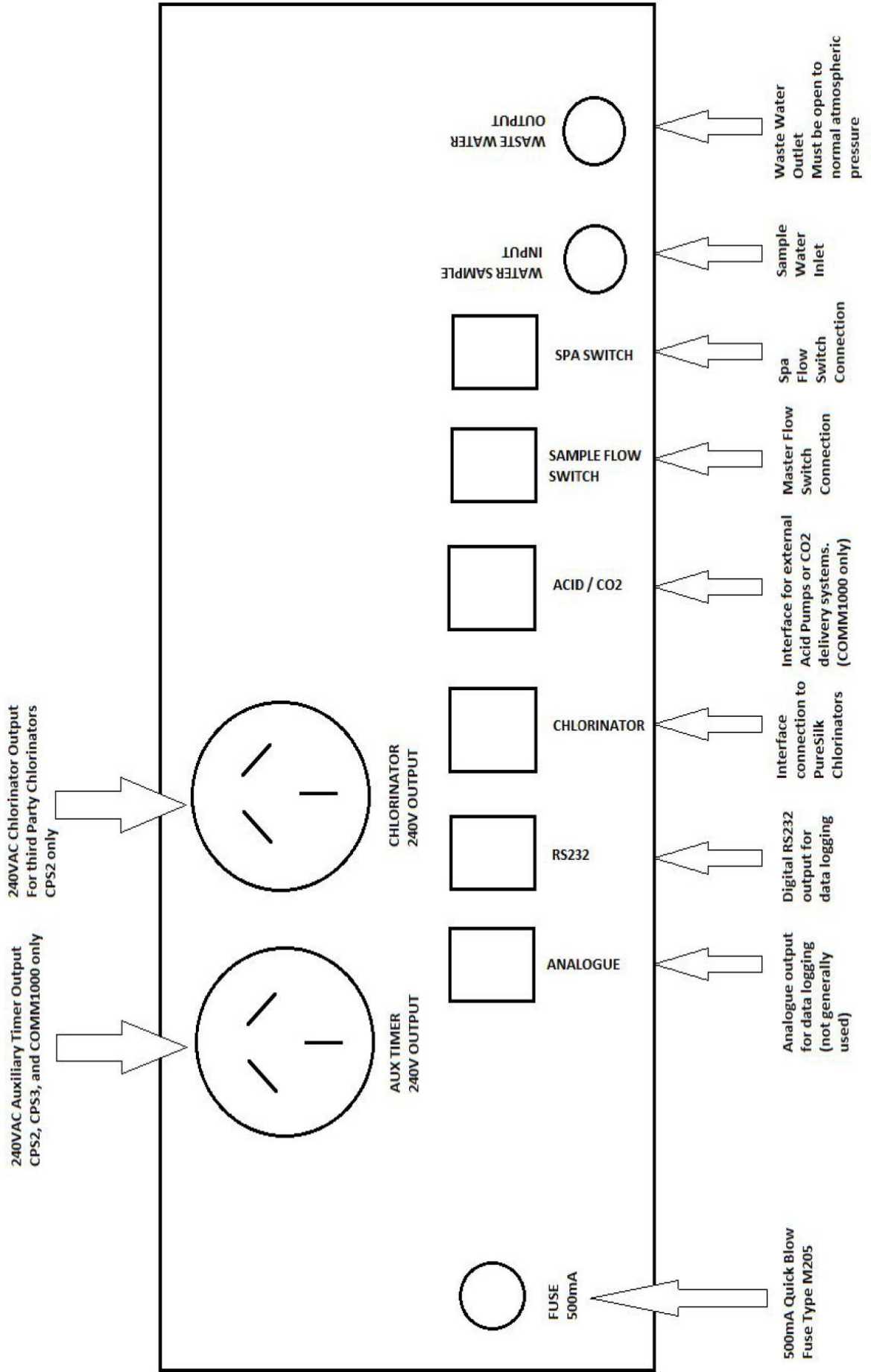
This Plumbing Diagram illustrates use of the AUX TIME CLOCK and AUTO INTERLOCK feature to control a pool cleaner Pressure Pump. The AUTO INTERLOCK prevents the Cleaner Pump from running dry or causing a damaging vacuum. Alternatively the AUX TIME CLOCK can be used to control an IN-FLOOR CLEANING PUMP with or without utilizing the AUTO INTERLOCK feature.

COMM1000

Typical Wiring for a PureSilk Chromatalyzer to PureSilk Chlorinator

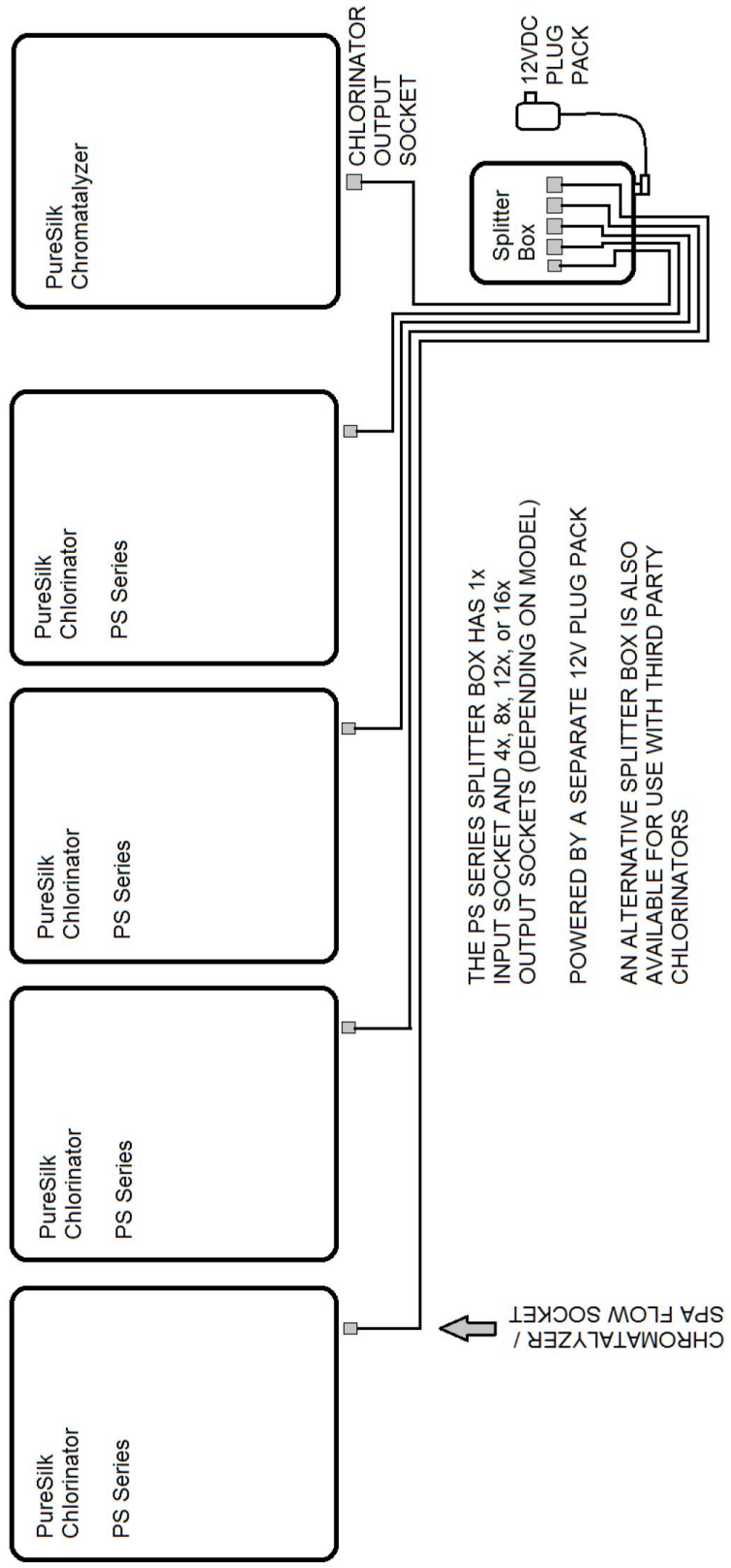


Bottom View of the PureSilk Chromatalyzer Connections



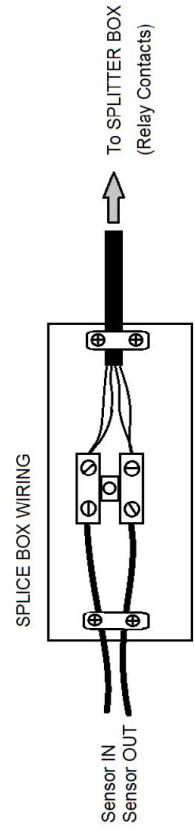
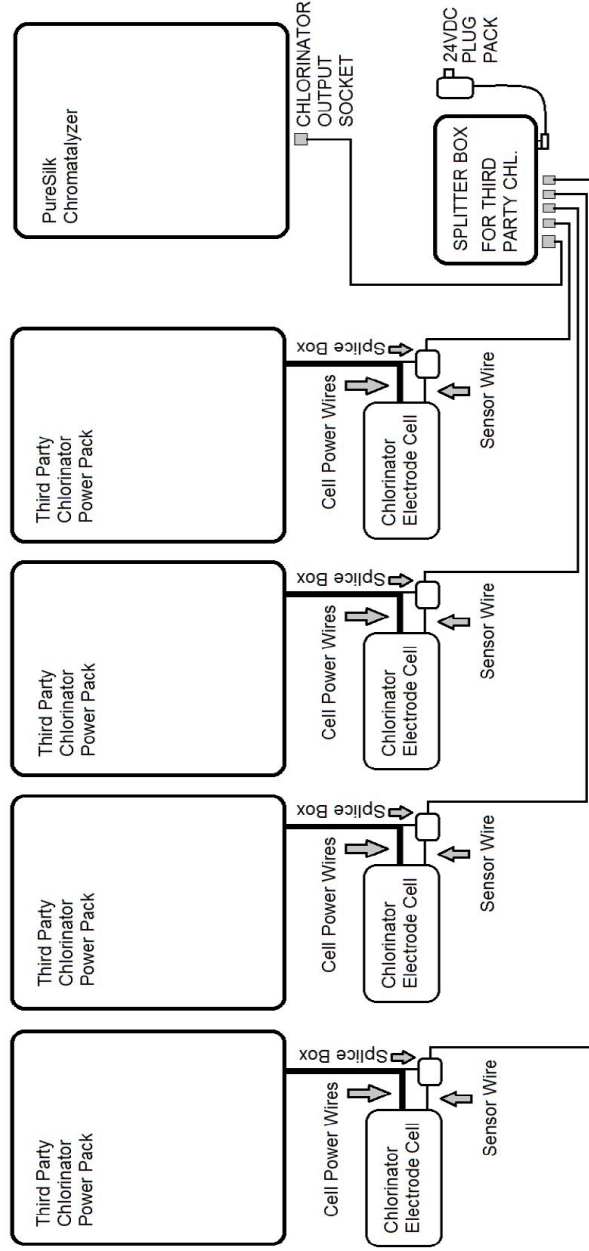


Chromatolyzer Multi-Chlorinator Set Up





Chromatolyzer to Multiple Third Party Chlorinator Set Up



Note: Polarity of sensor wires not critical

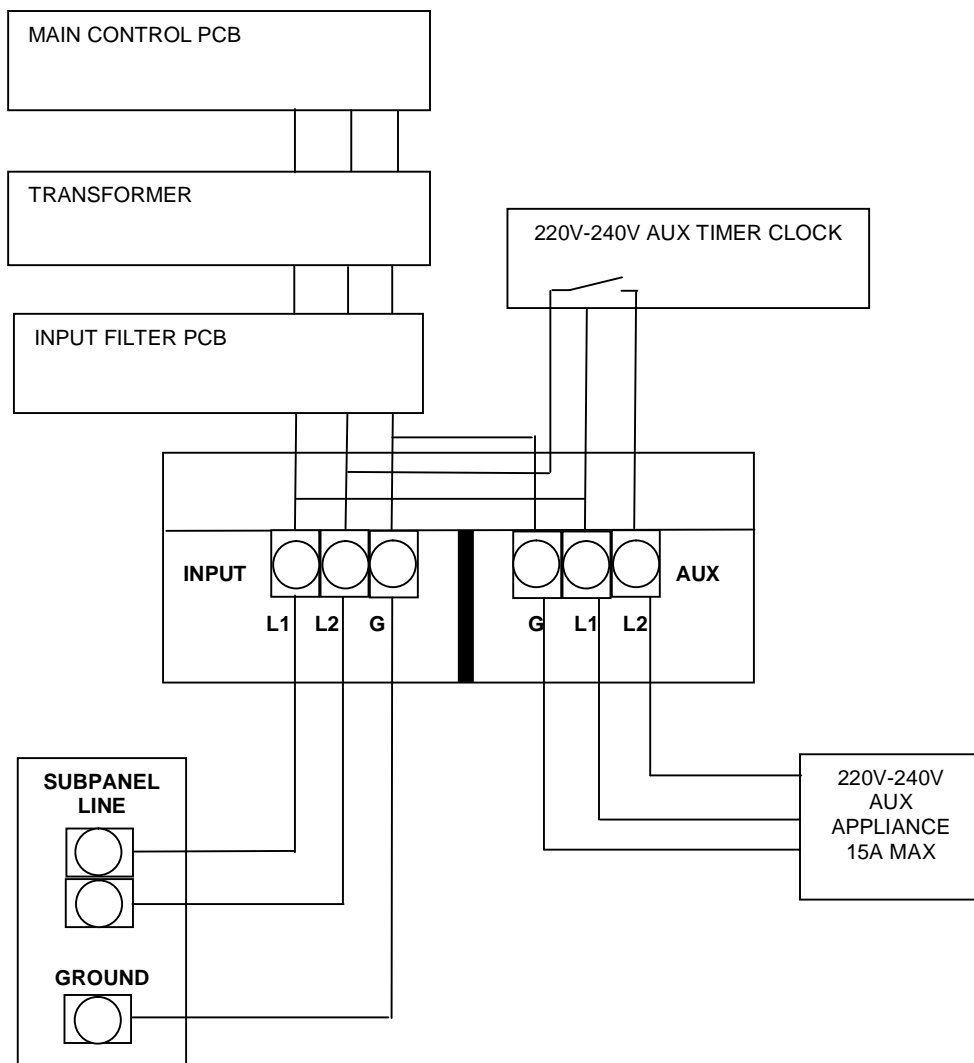
WIRING INSTRUCTIONS – USA / CANADA / EUROPE

WARNING – ISOLATE SUPPLY POWER TO CHROMATOLYZER BEFORE OPENING ELECTRICAL JUNCTION BOX, OR SERVICING CHROMATOLYZER OR APPLIANCES WIRED INTO THE JUNCTION BOX.

CAUTION – FOR CONTINUED PROTECTION AGAINST POSSIBLE ELECTRIC SHOCK USE ONLY IDENTICAL REPLACEMENT PARTS WHEN SERVICING.

Power must be switched off at the circuit breaker before performing any wiring or opening the junction box of the Chromatolyzer. Local and NEC electrical codes must be followed.

Refer to labeling on the Chromatolyzer and inside the junction box for wiring markings and power ratings.



WARNING: LINE VOLTAGE MUST BE OFF AT THE CIRCUIT BREAKER BEFORE PERFORMING ANY WIRING OR DISCONNECTING AUX APPLIANCE.

AN ISOLATION SWITCH ON THE SUBPANEL MUST ALSO BE INSTALLED.

Model: CPS2 Wiring Configuration

CPS2 - contains a time clock and controls the 220V-240V AUX.

Wire the Puresilk Chromatalyzer CPS2 directly to the 220V-240V line supply as per the diagram below.

The 220V-240V supply must have a minimum current rating of 15A and contain a GFI device and isolating switch.

Other devices as specified by the local electrical codes must be fitted.

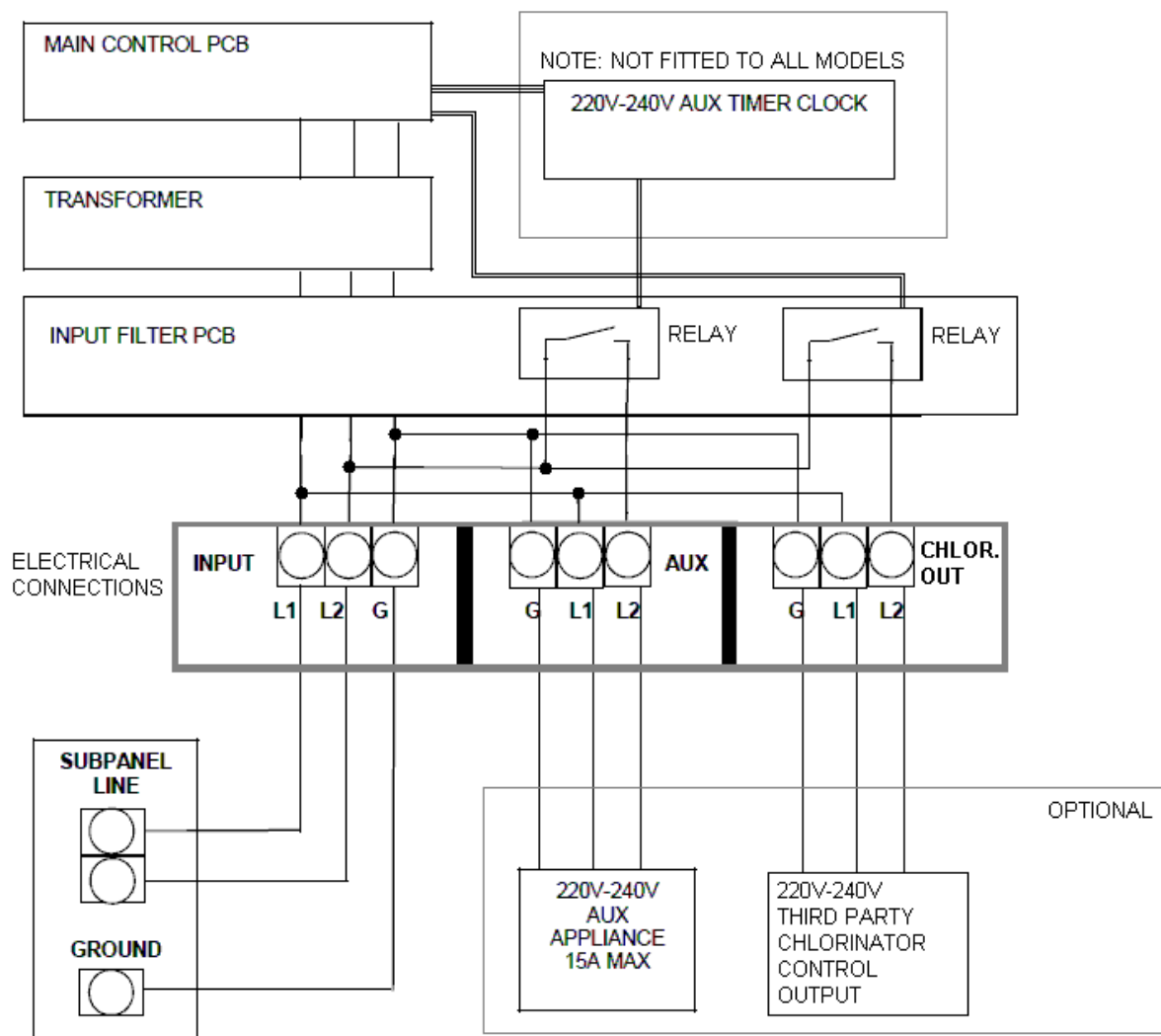
Ensure the ground wire is connected to the "G" marked on the input terminal block in the junction box.

The line supply must remain on at all times except where the unit is being electrically installed or serviced or when reagents are being replaced.

The line supply to the Chromatalyzer must not be controlled by an external time clock as it should remain on 24/7.

Refer to labeling inside Chromatalyzer junction box for wiring markings and power ratings.

220V – 240V WIRING



WARNING: LINE VOLTAGE MUST BE OFF AT THE CIRCUIT BREAKER BEFORE PERFORMING ANY WIRING OR DISCONNECTING AUX APPLIANCE.

AN ISOLATION SWITCH ON THE SUBPANEL MUST ALSO BE INSTALLED.

Model: CPS3 Wiring Configuration

CPS3 - contains a time clock and controls the 220V-240V AUX.

Wire the Puresilk Chromatalyzer CPS3 directly to the 220V-240V line supply as per the diagram below.

The 220V-240V supply must have a minimum current rating of 15A and contain a GFI device and isolating switch.

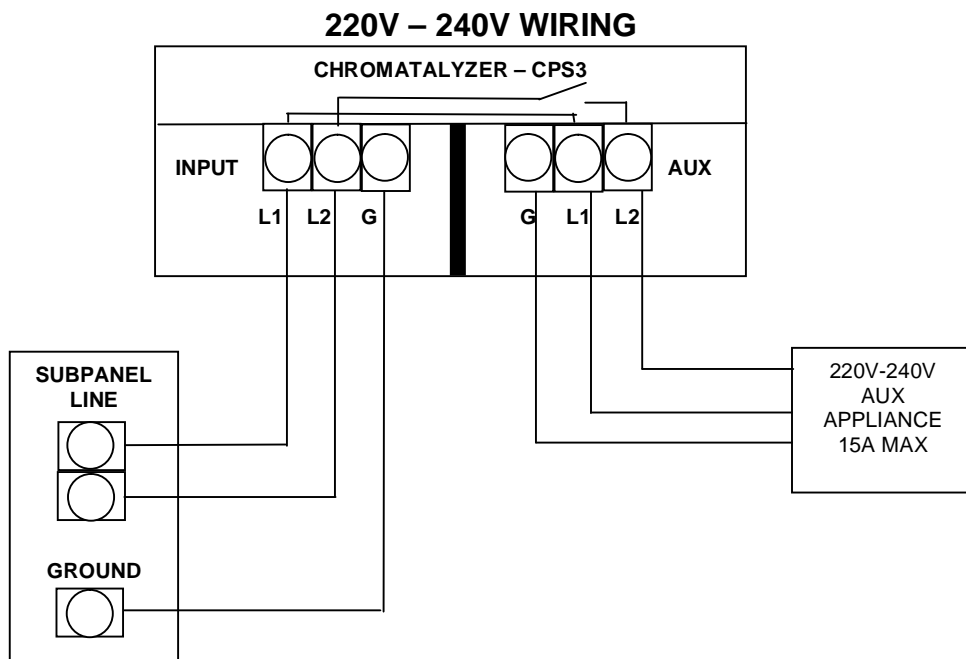
Other devices as specified by the local electrical codes must be fitted.

Ensure the ground wire is connected to the "G" marked on the input terminal block in the junction box.

The line supply must remain on at all times except where the unit is being electrically installed or serviced or when reagents are being replaced.

The line supply to the Chromatalyzer must not be controlled by an external time clock as it should remain on 24/7.

Refer to labeling inside Chromatalyzer junction box for wiring markings and power ratings.



WARNING: LINE VOLTAGE MUST BE OFF AT THE CIRCUIT BREAKER BEFORE PERFORMING ANY WIRING OR DISCONNECTING AUX APPLIANCE.

AN ISOLATION SWITCH ON THE SUBPANEL MUST ALSO BE INSTALLED.

Model: COMM1000 Wiring Configuration

COMM1000 - contains a time clock and controls the 220V-240V AUX.

Wire the Puresilk Chromatalyzer COMM1000 directly to the 220V-240V line supply as per the diagram below.

The 220V-240V supply must have a minimum current rating of 15A and contain a GFI device and isolating switch.

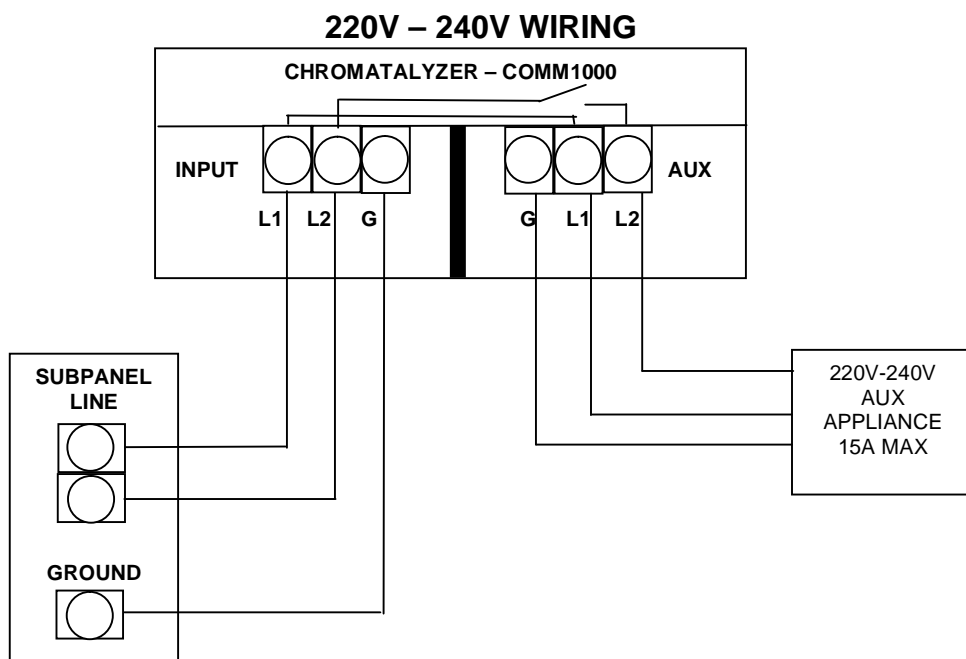
Other devices as specified by the local electrical codes must be fitted.

Ensure the ground wire is connected to the "G" marked on the input terminal block in the junction box.

The line supply must remain on at all times except where the unit is being electrically installed or serviced or when reagents are being replaced.

The line supply to the Chromatalyzer must not be controlled by an external time clock as it should remain on 24/7.

Refer to labeling inside Chromatalyzer junction box for wiring markings and power ratings.



WARNING: LINE VOLTAGE MUST BE OFF AT THE CIRCUIT BREAKER BEFORE PERFORMING ANY WIRING OR DISCONNECTING AUX APPLIANCE.

AN ISOLATION SWITCH ON THE SUBPANEL MUST ALSO BE INSTALLED.

ERROR CODE REGISTER

If errors are occurring you should check the following:

Error Code Register:

To check the list of errors which have occurred in the Error Code Register, press and hold the DOWN button until the error codes are displayed. Display should show E1-xx.

Error/s logged in the Error Code Register:

- In the LEFT HAND DISPLAY (CL display), E1.
- In the RIGHT HAND DISPLAY (pH display), xx represents the error code which has been logged. A code -0 (in pH display) means no error has been logged.
- Use the DOWN button to scroll through error register.
- E2, E3, E4.... E8, E9 are progressively older errors.
- As a new error occurs, it will always get logged into position E1 and existing errors will shift up down position. The error that is logged in position E9 will disappear from the log.
- To clear all errors from the Error Code Register, press up & down buttons simultaneously.

Refer to the trouble shooting guide for a full explanation of each error code.

Trouble Shooting Guide

SYMPTOM	POSSIBLE CAUSE	SOLUTION
CHECK CL FEED RATE LED FLASHING	CL Target has not been hit within 72 hrs	<p>High Chlorine demand may exist. Demand may be caused by high bather load. Stabiliser level may be low. For liquid chlorine units - check reservoir is not empty. Check peristaltic pump is operating O.K. For salt chlorinators - check unit is set to maximum output and operating correctly. Manual shock dosing may be required. Have a pool technician test water.</p>
CHECK ACID FEED RATE LED FLASHING	pH Target has not been hit within 72 hrs	<p>Check acid reservoir is not empty. Check operation of peristaltic pump is O.K. High acid demand may exist where excessive alkaline has been added to the pool. High acid demand may exist where a new cement based pool interior has been commissioned.</p>
SPA MODE - LED ON	Spa switch located on Spa suction line of a pool and spa combination has been activated. Spa suction line is open.	<p>Check if Spa suction line valve has been left open during normal filtration cycle.</p>
CL REAGENT 1 EMPTY - FLASH LED	Reagent No.1 is empty	<p>Switch unit off and replace bag.</p>
CL REAGENT 2 EMPTY - FLASH LED	Reagent No.2 is empty	<p>Switch unit off and replace bag..</p>
pH INDICATOR EMPTY - FLASH LED	pH indicator is empty	<p>Switch unit off and replace bag.</p>
EXCESSIVE REAGENT USE	Unit is operating at increased test frequency.	<p>TP or TS is incorrectly set for a higher than required test frequency.</p> <p>Where a Pool and Spa combination exists, check that the unit is not operating in Spa Mode at all times. Check Spa Switch is activated only when the Spa is being used. Check if Spa suction valve is functioning correctly.</p> <p>Check power is not switching on and off on a daily basis. The unit must not be time clock controlled. Each time power is switched onto the unit, a prime cycle will occur. This prime cycle will expel a small portion of reagent.</p>

Trouble Shooting Guide - continued

SYMPTOM	POSSIBLE CAUSE	SOLUTION
<p>LOW FLOW - STANDBY LED is ON but the filter pump is running.</p>	<p>Water is not being pumped</p> <p>Water is being pumped</p>	<p>Check baskets are clean. Check valve position. Check pump is primed. Check filter is clean. Check water level.</p> <p>Check sample switch is connected to correct port at base of unit. Check sample flow switch is positioned correctly as per flow direction.</p>
<p>TEST FAULT LED is ON</p> <p>When a test fault occurs an error code will be generated and displayed at the time of the fault.</p> <p>The unit will remember up to 10 error codes. To review, press and hold the DOWN button for 5 seconds.</p> <p>The latest error will display first.</p> <p>Error sequence number (E0 - E9) is in the left hand display followed by a numerical code (00 - 99) in the right hand display.</p> <p>Pressing the DOWN button again will scroll through the last 10 error codes.</p> <p>To clear all error codes from memory, momentarily press both UP and DOWN buttons whilst viewing the error codes. To return to normal operation, don't press any buttons for 10 seconds.</p>	<p>ERROR CODES</p> <p>01 - Piston not home</p> <p>02 - Calibration error</p> <p>03 - pH value outside limits</p> <p>04 - CL value outside limits</p> <p>05 - Sustained pH deviation</p> <p>06 - Sustained CL deviation</p> <p>07 - pH Reagent failed to prime</p> <p>08 - CL reagent 1 failed to prime</p> <p>09 - CL reagent 2 failed to prime</p>	<p>Check if waste tube is blocked.</p> <p>Check if water sample tube is blocked or drawing in air.</p> <p>pH level is outside of normal limits. Have pool water checked by pool shop.</p> <p>CL level is greater than 10ppm. This may be a result of manual shock dosing</p> <p>pH Target has not been met in over 72 hrs. Check acid reservoir.</p> <p>CL Target has not been met in over 72 hrs. Check liquid chlorine reservoir or salt chlorinator operation. Salt Chlorinator may not be sized correctly for pool volume. High CL demand may exist and manual shock dosing may be required.</p> <p>pH reagent bag is empty.</p> <p>CL reagent 1 bag is empty.</p> <p>CL reagent 2 bag is empty.</p>

Trouble Shooting Guide - continued

SYMPTOM	POSSIBLE CAUSE	SOLUTION
<p>TEST FAULT LED is ON (cont.)</p>	<p style="text-align: center;">ERROR CODES</p> <p>10 - pH reagent lost prime during test</p> <p>11 - CL reagent 1 lost prime during test.</p> <p>12 - CL reagent 2 lost prime during test</p> <p>13 - Piston position error - home switch activated too early</p> <p>14 - Piston position error - home switch activated too late</p> <p>15 - Acid delivery 48 hr quota exceeded</p> <p>16 - Liquid Chlorine 48 hr quota exceeded</p> <p>17 - Chlorinator 48 hr run time quota has been exceeded. (This occurs only in spa mode with Puresilk chlorinator)</p> <p>98 - Fault writing to eeprom</p> <p>99 - Fault reading from eeprom</p>	<p>Full compliment of reagent could not be delivered as bag emptied. Replace reagent bag.</p> <p>Full compliment of reagent could not be delivered as bag emptied. Replace reagent bag.</p> <p>Full compliment of reagent could not be delivered as bag emptied. Replace reagent bag.</p> <p>Check sample line for blockage. Check waste line for blockage.</p> <p>Check sample line for blockage. Check waste line for blockage.</p> <p>Abnormally large amount of acid has been delivered. Check if acid reservoir is empty. Have a pool technician test water. Switch unit OFF and ON again to reset. Where excessive alkaline has been added to the pool, this may occur. Where a new pool interior exists, acid demand may be high.</p> <p>Abnormally large amount of liquid chlorine has been delivered. Check if CL reservoir is empty. Have a pool technician test water. Switch unit OFF and ON to reset. High bather load or excessive CL demand may exist. Stabiliser level may be low.</p> <p>As per 16.</p> <p>Major fault - Contact service agent.</p> <p>Major fault - Contact service agent.</p>

CHROMATALYZER KITS - CPS2, CPS3 & COMM 1000				
List of components included in each kit for each model				
CODE	DESCRIPTION	CPS2	CPS3	COMM1000
32800	PURESILK INSTALLATION & OPERATIONAL MANUAL	✓	✓	✓
32801	PURESILK INSIDE DOOR OPERATION MANUAL	✓	✓	✓
32801	PSILK CPS2 ANALYSER C/W ACID PUMP & TIMER	✓		
32802	PSILK CPS3 ANALYSER C/W ACID/CL PUMP & TIMER		✓	
32803	PSILK COMM1000 ANALYSER C/W ACID/CL PUMP & TIMER			✓
22529	WALL MOUNT BRACKET C/W MASONARY PLUGS & SCREWS	✓	✓	✓
32654	TUBE FASTENING KIT C/W CABLE TIES	✓	✓	✓
32611	SAMPLE SWITCH C/W 50MM, 2" TEE & 2.4M, 8FT CABLE	✓	✓	✓
32655	ACID FEED TUBING HDPE- 8M 16FT	✓	✓	✓
32523	"FUME STOP" ACID DRUM CAP ASS'Y	✓	✓	✓
32700	ACID INJECTOR C/W CHK VALVE 50MM, 2"	✓		
32655	CHLORINE FEED TUBING HDPE- 8M 16FT		✓	✓
32659	LIQUID CHLORINE CAP ASS'Y		✓	✓
32701	ACID/CL INJECTOR C/W CHK VALVE 50MM, 2"		✓	✓
32720	PURESILK CL CONTROL CABLE 1.2M, 4FT BLACK	✓		✓
32650	FREE CHLORINE / PH REAGENT SET - 750 TESTS	✓	✓	✓
OPTIONAL ITEMS				
32533	SPA SWITCH C/W 50MM, 2" TEE & 3.2M, 10FT CABLE			
32720-1	PURESILK CL CONTROL CABLE 3.0M			
32900	RS232 INTERFACE CABLE - 2.4M, 8FT			
32540	SWITCH LEAD C/W ONE RJ11 PLUG - 3M			
32901	EXTERNAL ACID FEED CABLE - RELAY CONTACT 2.4M, 8FT			
32902	EXTERNAL CL FEED CABLE - RELAY CONTACT 2.4M, 8FT			
32903	PURESILK CL CONTROL SPLITTER 6P4C			
32903-1	PURESILK TRIPLE SPLITTER RJ11			
32904	PURESILK CL CONTROL DAISY CHAIN SPLITTER 4P4C			
32905	PURESILK CL CONTROL DAISY CHAIN CABLE 4P4C			
32906	PURESILK CL SLAVE/MASTER DAISY CHAIN CABLE			
32910	HDPE TUBING EXTENSION C/W CONNECTOR 2.4M, 8FT			
32911	HDPE TUBING - STRAIGHT CONNECTOR			
32912	HDPE TUBING - 90 DEG CONNECTOR			
33336	PURESILK 4-WAY SPLITTER BOX - PROVIDES CHROMATALYZER CONTROL FOR UP TO 4 PS CHLORINATORS			
33336-8	PURESILK 8-WAY SPLITTER BOX - CONTROLS UP TO 8 PS CHLORINATORS, C/W 8 x 32720-1			
33336-12	PURESILK 12-WAY SPLITTER BOX - CONTROLS UP TO 12 PS CHLORINATORS C/W 12 x 32720-1			
33336-16	PURESILK 16-WAY SPLITTER BOX - CONTROLS UP TO 16 PS CHLORINATORS C/W 16 x 32720-1			
33337	PURESILK 4-WAY SPLITTER BOX - CONTROLS UP TO 4 THIRD PARTY CHLORINATORS			

WARRANTY

DOMESTIC APPLICATIONS

Puresilk Chromatalyzer models: CPS2 and CPS3 (models not for commercial applications)

- 2 - Year Warranty - Parts
- 2 - Year Warranty - Workshop Repair Labour
- 1 - Year Warranty - Infield Labour (30kms of an authorised service agent)

COMMERCIAL APPLICATIONS - Must use COMM1000

Puresilk COMM1000 model:

- 1 - Year Warranty - Parts
- 1 - Year Warranty - Workshop Repair Labour
- 1 - Year Warranty - Infield Labour (30kms of an authorised service agent)

Conditions:

- Infield labour charges apply to units installed for a period exceeding 12mths
- Infield labour charges may apply within the 12mth period if location is more than 30kms from authorised service agent
- Freight charges are the responsibility of the home owner
- Under no circumstances shall the manufacturer be liable for incidental or consequential damages, inconveniences or expenses in connection with the removal, installation or replacement of equipment
- Under no circumstances shall the manufacturer be liable for damage caused to persons or property as a result of use of this equipment
- Charges will apply during the warranty period if installation or method of operation is not in accordance with our instructions

The following invalidates warranty

- Incorrect installation
- Incorrect use
- Misuse
- Water in excess of 40 deg C
- Water temperature of 0 deg C or lower
- Pressures exceeding 350kpa
- Where used for a purpose other than that described in this manual
- Use of non-genuine components / reagents / indicators
- Use of chemicals or optional equipment not authorised for use by Puresilk
- Where immediate action has not been taken to rectify a problem

HISTORY NOTES

Chromatalyzer model number:

serial number:

Date of chromatalyzer installation:

Reagent bags changed:

Peristaltic pump service:

Customer notes:
