

# **Cascade**

## **SWIMMING POOLS**

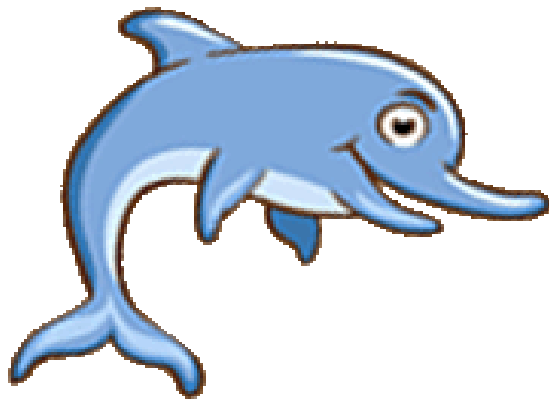
### **POOL OWNER'S MANUAL**

**IMPORTANT POOL OWNER'S INFORMATION**

**Vol. 48 v.XI**

**Sally the Cascade Dolphin Says:**

**“ KEEP THIS MANUAL IN A  
SAFE PLACE AND USE AS  
INFORMATION SOURCE ”**



**[www.cascade.co.nz](http://www.cascade.co.nz)**



**YOU ARE AUTOMATICALLY ENROLLED IN THE CASCADE POOL OWNER'S DISCOUNT CLUB.  
DISCOUNTS AVAILABLE ON MOST POOL EQUIPMENT AND CHEMICALS AND ARE  
AVAILABLE FROM AQUATECH INDUSTRIES, HILL STREET, ONEHUNGA  
(09) 636 9921 - [info@aquatech.co.nz](mailto:info@aquatech.co.nz)**

**[www.aquatech.co.nz](http://www.aquatech.co.nz)  
QUOTE YOUR POOL ID NUMBER AS THE ORDER NUMBER**

**TO DOWNLOAD SERVICE TIPS, MANUALS ETC FROM THE CASCADE POOL OWNERS PAGE:  
a TREASURE CHEST of equipment discounts, pool tips and 'how to' DIY guidance!**



**[www.cascade.co.nz/poolclubmember.htm](http://www.cascade.co.nz/poolclubmember.htm)**

**cut and paste or go to Cascade web page .....**  
**Main Cascade web page > Pool Costs > Trivia & Stuff > Pool Club (password required)**  
**pw = ' poolclubmember ' - don't include the 'quotes'**

**COPYRIGHT NOTICE**

This publication in its entirety is the Copyright of Cascade Industries Limited, PO Box 17 069 Greenlane 1546 and its author Laurence E (Larry) Ogden and is for the use of the customers of Cascade Pool's Franchise Dealers and all previous owners of Cascade swimming pools. Duplication by electronic or any other means is not permitted without the express permission first had in writing from the Author.

Pool JOB NUMBER \_\_\_\_\_

## Your 'Cascade Pool' Record

KEEP THIS IN CASE YOU SELL YOUR HOME

Date of Pool Order: \_\_\_\_\_ 20\_\_\_\_  
Date Installation Completed and Final Payment made \_\_\_\_\_ 20\_\_\_\_  
Original Owner(s) \_\_\_\_\_  
Street \_\_\_\_\_ Suburb \_\_\_\_\_  
Contract Total: \$ \_\_\_\_\_ Inc GST \_\_\_\_\_

Pool Installation Crew Name (1) \_\_\_\_\_ Contact Number: \_\_\_\_\_  
Name (2) \_\_\_\_\_

Building Approval Issue Date \_\_\_\_\_ 20\_\_\_\_ BA Number \_\_\_\_\_  
Compliance Certificate Date \_\_\_\_\_ 20\_\_\_\_ CC Number \_\_\_\_\_

Franchise Dealership (Name) \_\_\_\_\_

Your swimming pool warranties will be issued by the Franchise Dealer whom you purchased the pool from.

ULTIMATE POOL \_\_\_\_\_ Model Name \_\_\_\_\_ Shape \_\_\_\_\_

Size W \_\_\_\_\_ x L \_\_\_\_\_ x D \_\_\_\_\_ Water Capacity \_\_\_\_\_ ,000 litres

☐ OZONE ☐ 6 x OZONE ASSIST Model \_\_\_\_\_ ☐ DOLPHIN ☐ Not fitted

☐ Pool Lights qty ☐ Type \_\_\_\_\_ ☐ INFILLFOAM ☐ ABGAL INTERIOR

Daily Pool Operation Spring 6hrs Summer 12 Hrs Autumn 6 Hrs Winter 2 Hrs

Aquagenie Tabs Required Summer ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

(Note: You need less with OZONE fitted) Winter ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Heat Pump \_\_\_\_\_ ☐ 8/9kw ☐ 13/14kw ☐ 17/21kw Other \_\_\_\_\_

Heater Power Input 220v -240v \_\_\_\_\_ Input Kw Output Equiv \_\_\_\_\_ Kw

Qty \_\_\_\_ Make \_\_\_\_\_ Pool Pump ☐ 3/4hp 550w ☐ 1hp 750w ☐ 11.5hp 1125w ☐ \_\_\_\_\_ w

Skimmer ☐ AQUAGENIE ☐ S5000 ☐ OTHER \_\_\_\_\_

Pool Liner ABGAL Aqualux ☐ .770 mm ☐ .57 mm Colour \_\_\_\_\_

Warranty Validation - See SWIMMING POOL WARRANTY section for equipment validation.

**Note: Warranties will not be issued**, nor will any completion or warranty work be undertaken by us, and all pool equipment and accessories remain the property of the suppliers, **while progress payments remain outstanding**.

WARRANTY ASSIGNMENT (New Owners) \_\_\_\_\_

1st Assigned (Date) \_\_\_\_\_ Assigned to: \_\_\_\_\_ Noted By \_\_\_\_\_

2nd Assigned (Date) \_\_\_\_\_ Assigned to: \_\_\_\_\_ Noted By \_\_\_\_\_

3rd Assigned (Date) \_\_\_\_\_ Assigned to: \_\_\_\_\_ Noted By \_\_\_\_\_

4th Assigned (Date) \_\_\_\_\_ Assigned to: \_\_\_\_\_ Noted By \_\_\_\_\_

(Duly Authorised Person) \_\_\_\_\_



***Two basic pool cover types are available:  
SUNTRAP Solar “bubble” blanket and SERIES 2001 Heat Retention cover***

**SUNTRAP** CLEAR or LIGHT BLUE “Solar Covers” pass infra-red sunlight (the type that causes sunburn) to penetrate the light color layers, adding 2° - 4° of Free Heat to your pool.

BLACK Bubble covers are Heat Retention only and don't add much in the way of solar heating boost. Choose your preferred colour & tell the Project Manager.

**SERIES 2001** Heat Retention Covers are thick and bulky, with no added Solar benefit, but provide a few % more heat retention over Bubble covers. Roller systems are optionally provided to make placing & removal an easier job. Lightweight SOLARTRAP covers are easily handled and save the need for a \$995 cover roller.

Covers are used when a Pool Heater is operating as they both insulate and reduce the heat input required. In Winter, take the cover off - they are NOT designed as a debris cover for leaves.

Store them in the garage or pool shed for Winter. In the middle of Summer, you may need to remove the cover during hot days to stop the pool getting “too hot” as temperatures of 34° - 36° are possible.

Pool Cover Rollers are available on order from Cascade, ask why we don't automatically provide one!

**YOUR COVER IS NOT DELIVERED WITH YOUR POOL COMPONENTS, BUT WILL BE ORDERED FROM THE MANUFACTURER WHEN THE LINER HAS BEEN MEASURED AND ORDERED FROM ABGAL.**

**YOUR COVER WILL BE INSTALLED WHEN YOUR POOL SURROUNDS ARE COMPLETED AND WE ARE SATISFIED THE COVER WILL NOT BE DAMAGED BY ON-GOING CONSTRUCTION WORK.**

**CALL US WHEN THIS HAS HAPPENED. POOL COVERS ARE POPULAR AND DELAYS MAY OCCUR**

Sally the Cascade Dolphin Says:



"Make sure you  
get exactly what  
you want!"

**AS NOTED IN THE SALE & PURCHASE AGREEMENT:**

**THE POOL EXCAVATION, SOIL REMOVAL AND ANY RELATED COSTS THAT MAY ARISE DURING THE EXCAVATION STAGE ARE YOUR COSTS**

**WE WILL INSTRUCT YOUR CONTRACTOR TO EXCAVATE THE POOL IN THE CORRECT LOCATION, TO THE SHAPE AND DEPTH YOU ASKED FOR.**

**YOU YOU HAVE AGREED TO **TAKE THE TIME** TO CHECK THAT THIS MEETS YOUR EXPECTATIONS WHILE THE DIGGER IS STILL ON SITE**

**YOU MUST APPROVE THE "STEEL INSPECTION" WORK STAGE BEFORE ANY CONCRETE IS PLACED TO ENSURE WE HAVE NOT MISUNDERSTOOD YOUR EXPECTATIONS!**

**TO ENSURE THAT THE INSTALLATION TEAM PRODUCES EXACTLY WHAT YOU WANT, YOU MUST ATTEND THE STAGE WHEN WE CONTOUR YOUR CONCRETE POOL FLOOR!**

**IF YOU DO NOT ATTEND, YOU MUST ACCEPT WHATEVER EVENTUATES!**

**THIS POOL HAS A HAND-FINISHED CONCRETE FLOOR WHICH WILL HAVE MINOR UNEVENNESS AND VARIATIONS IN PLASTER LEVELS. THESE DO NOT AFFECT THE QUALITY OR USEFULNESS OF THE PRODUCT**

**Once the concrete has set, it CANNOT be modified, so any subsequent changes you want will involve cutting out the floor and re-concreting.**

**This will be AT YOUR COST!**

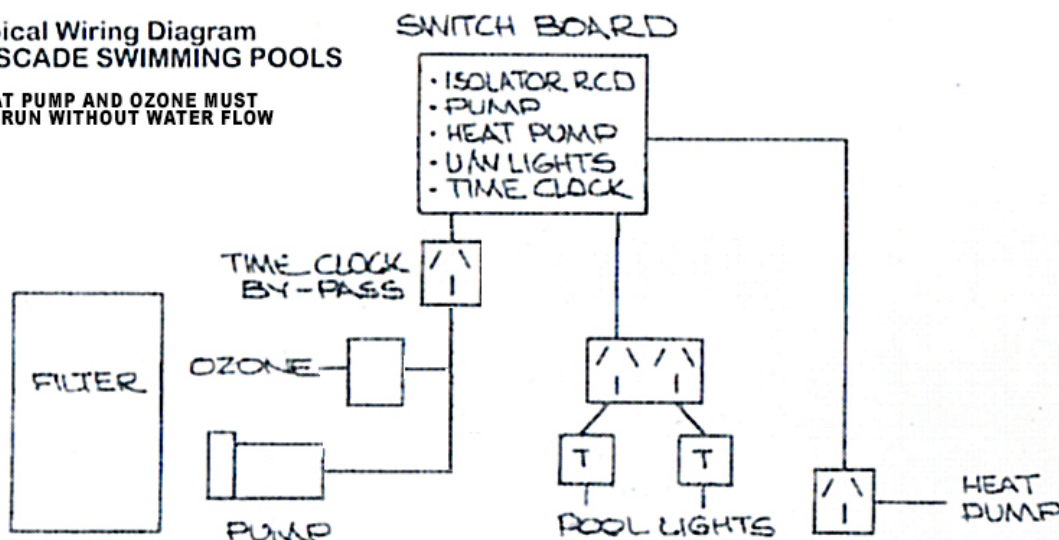


## SUGGESTED ELECTRICAL SWITCHBOARD for POOL EQUIPMENT

All electrical connections must be protected from weather, unless they are in a shed or under the house

### Typical Wiring Diagram CASCADE SWIMMING POOLS

HEAT PUMP AND OZONE MUST  
NOT RUN WITHOUT WATER FLOW



**Filter Pump:** 220/240 volt 50 Hz Self-Priming pump with attached 'Hair & Lint Strainer'. Electric motors vary in power requirements depending on volume of pool water. Two smaller pumps & filters may be used rather than one large filter tank and pump. Pump(s) require 3 pin socket outlet which should be Weatherproof type and housed in a weatherproof box or installed inside a building or shed.

**Pump Motor Sizing:** Pools up to 30 CuM = 1x 550w pump. Up to 60 CuM = 1x 750w pump. Up to 120 CuM = 1x 1,150w or 2x 750w pumps or more. The size provided is calculated by the pump supplier.

**Time Clock:** A top quality THEBENS time clock is supplied for filtration system. Fit a *bypass switch* for pool vacuuming during "power off" times. The pool pump(s) are plugged into this quality device. Instructions on setting the timer is included in the Handover Manual supplied to you on handover of the pool.

**OZONE:** Prozone units combine UV/CD 35w bulbs, providing low-cost water sterilisation. Use with OZONE ASSIST program to keep Algae away! CAUTION: **Power to Ozone unit MUST coincide with power to pool pump.** Warranties are voided as if unit can be operated independently, it will be damaged

**LED Pool Lights:** Light Emitting Diodes (ie LED) lights provide bright output at low power consumption, with one transformer powering up to six LED lights under the new Electrical Legislation. To switch the pool lights on from inside their house, inform the Electrician you want to do this.

**Heat Pumps:** Heat pump values are quoted as OUTPUT (not INPUT) requirements. Output is a multiple of Input described as COP (**Coefficient Of Performance**): a COP of 4.5 means 2.0Kw of input will generate 9.0Kw of equivalent heating. Hardwire the unit into the electrical supply switchboard. It is protected against overheating by an Interlock Flow Switch which shuts it down if the waster pressure slows down or stops.

As an example, here are the values for typical Filtermaster units:

Mfg	Model	Volts	Nom output	Kw Input	Run Amps/	Fuse/Amps
Filtermaster	FM14	220-240	14.0 Kw	2.90	6.0	15a
OASIS	CSP9	220-240	9.0 Kw	1.50	6.0	15a
OASIS	CSP13	220-240	13.0 Kw	2.60	6.0	15a
Filtermaster	FM14	220-240	14.0 Kw	2.90	6.0	15a
Filtermaster	FM21	220-240	21.0 Kw	4.40	9.6	25a

**The heat pump power interlocks to a pressure switch which prevents operation when water flow stops or is too low, or when the pool is being backwashed. Do not run the heat pump without water flowing through it.**

To avoid recirculating exhausted (cold) air back into the intake side, the intake and exhaust sides of the heat pump must be physically separated by a wall or ducting otherwise the unit must be installed in open air without any physical barrier or restriction to the exhaust side air flows.

If heat pump is installed inside shed or closed room, ensure a continuous flow of external intake air via a grill or vent into the room, and cold exhausted air vented outside the area. Avoid cold air being drawn back into heat pump's intake.



## Be familiar with these basic principles! **RAIN CHANGES EVERYTHING!**

Rain brings all sorts of contamination from the sky: algae, acids, alkalines, dust, dirt, pollen, bird droppings, smoke particles from Australian bush fires etc. which affects pool pH and clarity. Check the pH regularly in the wet season!

### **NEVER EMPTY THIS SWIMMING POOL!**

**Even after heavy rain. It does not hurt the pool to be 'full'. Water holds the liner in place, and lowering or emptying the pool could cause the liner to shift. Emptying the pool without calling us for advice invalidates the warranty - so DON'T!**

1. When the pool is first filled operate the filtration unit 24 hours per day. There is more debris and waste going into your new pool so extra filtering is needed at this time - 24 hours a day until the surrounds have been completed, and at any future time when water gets out of balance or goes green. Once pool stabilises, cut filtration to the times recommended at the front of this manual.
2. The Correct 'Cascade' Routine! Correct water sterilisation is based on these elements of a properly Balanced Pool.



- (a.) pH 7.6 or as close as possible ( 7.4 - 7.8)
- (b.) **OZONE POOL: Residual Chlorine .05 ppm (2-4 Tabs in Aquagenie)**  
**CHLORINE ONLY POOL: Residual Chlorine Tablets in Aquagenie)**
- (c.) Calcium Hardness 200 parts per million (200 mg/Litre) recommended
- (d.) Total Alkalinity 120 parts per million (120 mg/Litre) recommended
- (e.) Superchlorinate the pool monthly in season by raising the Chlorine Residual to 2 ppm
- (f.) Use OZONE ASSIST program as described on the OZONE page!
- (g.) Remove pool cover (and leave off for 24 hrs) while treating your pool.

**The pH (Like the Richter) scale, each 1/10<sup>th</sup> is 10 times the previous measurement!** (10-100-1000-10000 etc.)

## **By maintaining these values, and you will have a "happy" swimming pool!**

The Aquagenie system, uses small (1" or 25 mm) Tri-Super-90 Tabs available from Aquatech or the Cascade web site! NEVER break up large (3" or 75 mm size) generic trichlor tablets with a hammer to fit the Aquagenie Cannister as an explosion and burn injury may result, and DON'T put these generic trichlor tabs in the skimmer basket as they will erode too quickly and rapidly reduce the pH to unsafe levels!

3. **DO NOT USE MORE THAN THE RECOMMENDED QUANTITY OF AQUAGENIE TRI-SUPER-90 TABS FOR YOUR POOL!** With Ozone fitted, try going without any TriChlor tabs. If your pool goes green, use OZONE ASSIST Algaecide. If you prefer a small amount of chlorine instead of the algaecide, use 2-3 TS90 tablets for smaller pools to 4-6 for larger pools - depending on pool capacity.

4. **SOME CHLORINE IS NECESSARY! (unfortunately, but it's the Instant Effect you need occasionally)**

**"Shock Dose" every month during high season or more often** if the pool is experiencing heavy bather use.

"Little kids" create more work for the Aquagenie and Ozone. Rule of thumb is: tip one liter of Liquid Chlorine or one coffee-size cups of Granular Chlorine into the Aquagenie water flow while filtration is running. Don't let anyone swim for 20 minutes or so after shock dosing the pool.

5. Winterise your pool after the summer season is over. See WINTERISE Section in this Manual

6. "Pool Shop Advice". Many pool shops do not understand the different needs for your CASCADE pool finish, and may give you inadvertently misleading - or even contradictory - advice. They MAY NOT UNDERSTAND the lack of Chlorine in your water sample, as they many not realise that you are using OZONE as your Primary Disinfectant!

It's better to follow your 'Cascade' Pool Owner's Manual, and use only our proven method of caring for ABGAL's Aqualux Interior swimming pool liners. Some overseas - particularly Australian based - pool products are meant for coarse River Pebble Plaster finishes, and are too harsh for vinyl liner pools - SuperChlor is one, so don't use these products in your pool - and DON'T broadcast anything into the pool water - despite what the instructions might say on the packet or container!

# **CASCADE POOL CLUB MEMBERS - private web page - a valuable on-line resource**

## **[www.cascade.co.nz/poolclubmember.htm](http://www.cascade.co.nz/poolclubmember.htm)**

### GENERAL ONLINE INFORMATION, SERVICES and VIDEO LINKS MENU

- ☐ Using the Aquagenie: Part I Vacuuming your swimming pool click here
- ☐ Using the Aquagenie: Part II Backwashing the pool click here
- ☐ Here's a video on how to check the pH in your swimming pool
- ☐ Cascade recommends Ozone water treatment. Click the online link for some facts!
- ☐ Why must you SHOCK DOSE your swimming pool regularly?
- ☐ I don't know what pool terms are, I need to learn a pool owner's vocabulary!
- ☐ I need to know what to call the filtration bits and pieces!
- ☐ I can't find my Pool Owner's Manuals and need a copy .....
- \* Download the current version as supplied with a new pools
  - \* Order a printed copy of the Manual
- ☐ Simple Advice - Basic pool care principles!
- ☐ Are there any definite DONT'S associated with vinyl liner pools?
- ☐ Pool Interior manufacturer ABGAL has an on-line video with liner care information
- ☐ I can't figure out my water test results and need you to check the water test for me
- ☐ I want to do some simple Do-It-Yourself maintenance on my Cascade pool
  - \* Sand Filter media replacement
  - \* MPV (Multi Port Valve) Spider Gasket replacement
  - \* Change a niche-style underwater pool light bulb
  - \* Service (acid wash) a Salt Chlorinator electrode cell
  - \* Patching a damaged pool liner
  - \* Cleaning out the Hair & Lint Strainer
- ☐ I want to change my filter sand but prefer to watch a video for instructions
- ☐ I think my pool is leaking from the Mulit-Port valve: can I service it myself?
- ☐ I'm a new owner and need help how to keep my pool in top shape!
- ☐ I have had a NEW pool installed and want to send you a Customer Report about it
- ☐ I need a pool serviceman to come and fix a problem with my pool.
- ☐ I want to empty my pool - SHOULD I?
- ☐ My pool liner seems to have developed a wrinkle!
- ☐ Aquagenie Skimmer - click the link to see the manufacturer's promo video
- ☐ I need a Copy of the water test log page for my Owner's Manual
- ☐ Use our Water Analysis Sheet for recording your pool water data!
- ☐ Saturation Index interactive spreadsheet available for advanced water clarity experts!
- ☐ How to WINTERISE your Cascade swimming pool in autumn!
- ☐ How to OPEN your Cascade swimming pool for SPRING.
- ☐ Does your old CASCADE pool needs refurbishing and a new liner?
- ☐ Order a replacement pool or spa cover on-line
- ☐ I want to visit the Pool Warehouse to get pool chemicals or accessories





regularly use ....

# OZONE ASSIST

New and Existing Pools, and **RESTART** again each **MAY** (Refer to TYPICAL OZONE ASSIST PROGRAM below)

An initial dose - usually the entire 1 litre bottle - tipped into the skimmer return stream while running then regular monthly **TOP UP** application of **OZONE ASSIST** Algae Inhibitor will work in conjunction with Filtermaster's Ozone Generator fitted to your Cascade pool and will keep your pool free from most common forms of Algae for extended periods of time without the need of - or relying on - superchlorination with chlorine. Keep a second bottle on hand for this process - the two should last the entire swimming season.

Cascade **OZONE ASSIST** is designed to eliminate Algae, but it has no affect on pathogenic bacteria so you must continue with your normal OZONE pool disinfection, preferably with a low dose (0.5 ppm) of Free Available Chlorine by keeping a couple of Aquagenie Tablets in the skimmer's tab cannister under the lid.

Before restarting the program each Spring, vacuum your pool and backwash the filter, adjust your pool water pH to 7.6 and Balance the pool water to 120 ppm Total Alkalinity and 200 ppm Calcium Hardness. Higher calcium levels will reduce the effectiveness of **OZONE ASSIST**.

#### DOSAGE LEVELS:

Pool Volume	START	TOP UP	DOUBLE DOSE
Under 30,000 l	500 ml	50 ml	100 ml
<b>Up to 50,000 l</b>	<b>1000 ml</b>	<b>100ml</b>	<b>200 ml</b> = average size family pools
Up to 100,000 l	2000 ml	200ml	400 ml

#### DIRECTIONS:

Pour the required amount into the Aquagenie return stream while pool is filtering. **TOP UP** with the amount indicated above regularly - preferably on a monthly basis. Put it on your calendar, so you don't forget!

#### TYPICAL **OZONE ASSIST** Program:

Spring				Summer					Winter			
Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	
START	TOP UP	TOP UP	TOP UP	DD	TOP UP	TOP UP	TOP UP	<b>RESTART</b>	TOP UP	DD	TOP UP	

#### WINTERISING:

Check the Pool Owner's Manual section on winterising your swimming pool. If the pool is going to be out of action for several months over winter, you may want to reduce the filtration time to as little as 1 hour daily. Keep an eye on the water clarity, and if any signs of algae re-appear, add an **OZONE ASSIST** Double Dose and run the filter for 8 hours for a day or so until the water clears up again. In this way you may be able to economise on power costs by not having the pool filter running unnecessarily.

**OZONE ASSIST** program may be used safely while the pool is not in use by swimmers for at least 24 hours

There is no bacteria/pathogen elimination while the filtration (and OZONE generation unit) are switched off,, only when the system is running and the Ozone Generator is switched on.

#### SAFETY:

**HARMFUL SUBSTANCE; KEEP OUT OF REACH OF CHILDREN**

#### PRECAUTIONS & FIRST AID

Not to be used for any purpose other than assisting the Ozone Generator fitted to your Cascade pool to assist the elimination and prevent further growth of Algae. Avoid irritation by contact with eyes and skin. Wash your hands after using this product! If accidentally ingested by any person .....

**IMMEDIATELY DIAL 111 and request AMBULANCE**



For those of us  
with a short  
attention span!

## **SOME SIMPLE STEPS TO CARING FOR YOUR 'CASCADE' SWIMMING POOL**

### **1. NEVER EMPTY YOUR SWIMMING POOL!**

WE WILL DO IT for you if needed - It's NOT USUAL PRACTISE to empty a pool

### **2. DON'T LOWER THE POOL WATER LEVEL IF IT "FILLS UP" in WINTER**

The pool has a SELF-LEVELING DEVICE in the Aquagenie

### **3. THIS OZONE POOL IS NOT A "CHLORINE" POOL**

OZONE replaces Chlorine - so there will be NO CHLORINE if you get the water tested at a pool shop - tell them! Use the OZONE ASSIST PROGRAM in Winter

### **4. FILTER 8 - 10 HOURS IN SUMMER, 2 - 4 HOURS IN SPRING & AUTUMN**

Refer to the OZONE ASSIST page for Winter filtering suggestions

### **5. NEVER THROW ANY POOL CHEMICALS INTO THE POOL WATER**

All pool chemicals go in the SKIMMER while pump is running

### **6. BACKWASH the GLASS FILTER MEDIA for ONE to TWO MINUTES**

at least EVERY SECOND MONTH in the high summer SWIMMING SEASON

### **7. CHLORINE IS A BLEACH! NEVER OVERCHLORINATE YOUR POOL!**

The maximum level for a monthly chlorine 'shock dose' is 2.0 ppm

### **8. CORRECT pH is VITAL for a HAPPY POOL!**

Check pH MONTHLY during the swimming season and TWICE in the off season!

### **9. DON'T COOK YOUR POOL WITH THE POOL COVER!**

Your Thermal Retention Cover is to keep the HEAT IN when heating your pool.

Don't leave it on all the time if you are not heating the pool.

Don't leave it on all Winter, and remove if you Shock Dose the pool!

**FOR SIMPLE MAINTENANCE TASKS YOU CAN DO YOURSELF**

Go to the Pool Club on the Cascade Web Site for simple procedures  
[www.cascade.co.nz](http://www.cascade.co.nz)



**EVERY POOL-WATER PROBLEM REPORTED TO US  
HAS BEEN TRACED BACK TO INCORRECT WATER BALANCE!**

**THE MOST IMPORTANT SWIMMING POOL WATER BALANCE  
IS THE pH!**

**7.6 = Spot On!**

**OZONE IS pH NEUTRAL**

Salt (and sodium chlorines affect the pH)  
This is why we like OZONE instead of CHLORINE

**LOW pH IS **ACIDIC** WHICH CAN CREATE WRINKLES IN YOUR LINER!  
ACIDIC WATER WILL STING SWIMMERS EYES and BODY PARTS!**

**HIGH pH IS **ALKALINE** AND CAN HURT SWIMMERS  
EYES AND SKIN & STING SOFT TISSUE**

**WATER PREFERS TO BE 'NEUTRAL' BUT IT'S EASILY INFLUENCED  
LIKE BY ACID OR ALKALINE RAIN!**

**GRANULAR & LIQUID CHLORINE CAN RAISE POOL pH TO 11.00!  
SHOCK DOSE POOL AS LEAST OFTEN AS POSSIBLE**

**SALT POOLS PRODUCE EQUAL AMOUNTS CHLORINE+CAUSTIC SODA  
**CAUSTIC SODA HAS A pH OF 14.0!****

**IF YOU HAVE A SALTY FITTED, YOU MUST CONSTANTLY  
MONITOR THE pH TO AVOID SWIMMERS & DAMAGE TO LINER**

**BUT!  
IT WILL BE DIFFICULT TO "GET THE WATER RIGHT"  
UNLESS THE pH IS AT THE  
CORRECT LEVEL - 7.6 !**

**(7.4 to 7.8 is ... well, ... OK - but not perfect!**



## **Here's our FIVE STEP PLAN for WINTERISING YOUR POOL**

### **WINTERISING: COMPLETE INSTRUCTIONS**

(1.) Remove and store Pool Cover, as Algae will form underneath during winter and if using a chlorine feeder a buildup of chlorine gas under the cover with no sunlight exposure could damage the pool liner.

(2.) Turn off Heat Pump power at mains switch. Give pool a thorough vacuum then backwash the filter until the discharge runs clear.

(3.) Using the "Chemistry Set" water test kit (not the test strips), check pool water balance and ensure levels are: *calcium hardness* 200 ppm, *total alkalinity* 120ppm. If they need adjusting, recheck after adding Calcium Chloride and/or Sodium Bicarbonate, then adjust *pH* to 7.6. Add 1 litre Cascade **OZONE ASSIST** for all pools up to 50 kl, 2 litres *or more* for larger pools. Add the monthly **TOP UP** amount specified for your pool size.

(4.) (4.1) Chlorine-only pools: Reduce daily filtration time to 2 to 4 hours depending on whether your pool is less than or more than 40kl. For pools >100 kl set timer for 3 - 6 hours. Reduce the quantity of Aquagenie chlor-tabs to 4 - 6 per skimmer.

(4.2) **OZONE - OZONE ASSIST**: If you are following the **OZONE ASSIST** program, don't put any chlor-tabs in the Aquagenie until Spring start-up. You may not have to run your pool filter more than an hour or so per day until spring as long as no-one is swimming in the pool. (NOTE: there will be little or no bacterial protection if the OZONE generator is running restricted hours). Do a monthly visual check of the poolwater clarity, and if the pool starts going green, use a double-dose and follow the directions on the **OZONE ASSIST** page. If the pool starts to look green, superchlorinate.

\* Check the water clarity periodically to see if algae is forming.

If there is, add a **DOUBLE DOSE** of Cascade OZONE ASSIST with the filter running for 15 minutes.

### **USE ONLY 'CASCADE CERTIFIED' POOL CHEMICALS!**

Order direct from the Cascade Pool Club' web Site! Pool Chemicals at Wholesale Prices!

Don't worry about lowering your pool water when it fills with rainwater. Aquagenie pools have a self-adjusting level and need no intervention from you. Non-Aquagenie pools may "overflow" without any problem, and both will overflow into the pool drainage we installed when building your pool, so it is not necessary to manually lower the pool.

**DON'T LOWER YOUR POOL DOWN IF IT FILLS WITH RAIN - LET THE  
AUTOMATIC SYSTEM DO THIS FOR YOU.**

**FAILURE TO NOTE THIS DETAIL COULD CAUSE  
A FUTURE PROBLEM WITH THE POOL!**

**CALL CASCADE'S HELP LINE (0800) 227 223 IF YOU HAVE ANY QUESTIONS!**





## ***Here's our **FOUR STEP PLAN** for **SPRING OPENING YOUR POOL*****

### **SPRING OPENING: COMPLETE INSTRUCTIONS**

Backwash the pool filter thoroughly for 3 - 5 minutes - but don't lower the pool too far! Increase Filtration time, initially to 6 - 8 hours, then 10 to 12 hours in the height of summer (experiment with this - all pools differ!).

**OZONE POOLS:** Read the **OZONE ASSIST** pages for Directions

**CHLORINE POOLS:** Increase Chlorine levels by adding 8 to 10 Aquagenie Tabs into skimmer cannister,

**Balance pool water** by adjusting Calcium Chloride hardness to 200 ppm and Total Alkalinity by adding sodium Bicarbonate to 120 ppm and pH UP or pH DOWN (as needed).

These are **INERT INORGANIC COMPOUNDS** - not chemicals!

[Adjust the pH **LAST**, as these other compounds will alter it!]

Install the Pool Cover and Switch on the Heat Pump. It is a heat retention cover, and leaving it off in the initial stages will delay the pool heating up to your required temperature. Run the pool filtration system 24/7 on time clock override if possible, to bring the pool water up to the required temperature.

Heat Pumps are "maintenance heaters" and will take several days to reach optimum pool temperature.

### **USE ONLY CASCADE CERTIFIED POOL CHEMICALS!**

Order direct from the Pool Club Site! Pool Chemicals at Wholesale Prices!

Don't worry about lowering your pool water when it fills with spring rainwater. Aquagenie pools have a self-adjusting level and need no intervention from you. Non-Aquagenie pools may "overflow" without any problem, and both will overflow into the pool drainage we installed when building your pool, so it is not necessary to manually lower the pool.

Every few weeks glance at the pool to see if any algae is forming.

If there is, repeat the instructions for using **OZONE ASSIST**.

### **THE QUICK VERSION of the OPENING PLAN:**

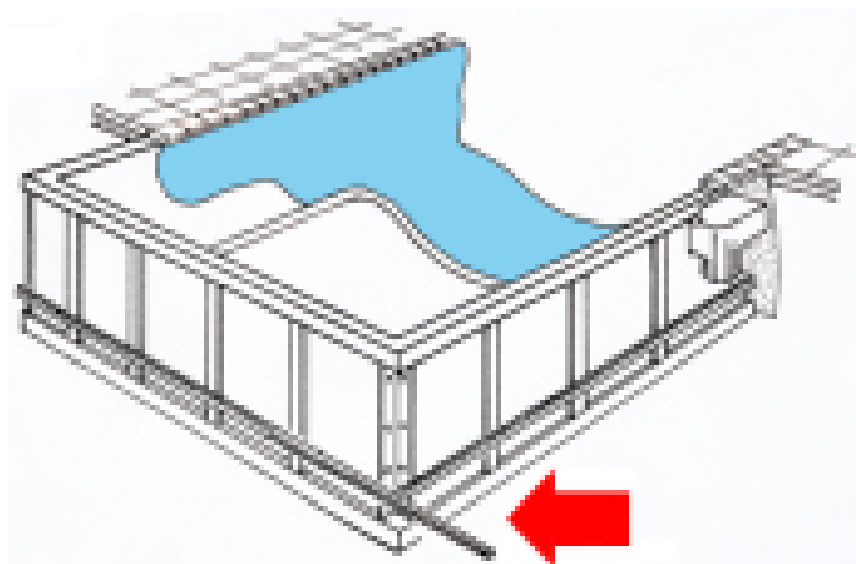
1. Backwash the filter thoroughly, then reset your time clock to 6 to 8 hours.
2. (a.) **OZONE POOLS:** Follow the **OZONE ASSIST** Directions on the **OZONE ASSIST** Pages  
  
(b.) **CHLORINE POOLS:** Increase the Aquagenie tablets in the Aquagenie Cannister to 8 to 10 to maintain a residual chlorine level of 1.0 ppm to 2.0 ppm.
3. Replace the pool cover before you start the heat pump.
4. Switch on the Heat pump or Gas Heater at the wall.

**CALL CASCADE'S HELP LINE (0800) 227 223 IF YOU HAVE ANY QUESTIONS!**



**Cascade pools fitted with a self levelling  
AQUAGENIE skimmer will overflow  
into a scoria backfilled  
hydrostatic drain installed around  
the outside of the pool wall.**

**If the pool is located on a sloping site, we will  
try to run the outlet of this drain to the slope, in which  
case locate and mark where it is, and don't  
allow it to become blocked.**




**IF YOU PLAN TO UPGRADE YOUR POOL AREA  
OR CHANGE THE LAND CONTOURS  
AT SOME FUTURE DATE .....**

**BE AWARE OF THIS DRAIN LOCATION!**

**Hydrostatic drainage around the pool must not be  
compromised by future site works!**

# Cascade pools


## YOU MUST READ THIS: YOUR INSTALLATION TIME-LINE


 = FOR YOUR INFORMATION

Thanks for choosing an Authorised Cascade Franchisee and Certified Installer (aka “we”, “our”, “us” below) to install your swimming pool in accordance with Cascade’s patented designs and approved Dealer Installation Manual.

As you are reading this Pool Owner’s Manual, the construction process has or is about to, commence by us. You have contacted your Insurance Broker to ensure that we are noted on your Insurance Policy as a Contracts Works risk? If not please do so now! The process of construction your pool proceeds as per the following schedule.


□ The relevant site plans and Engineering data has been provided, and application made for a Building Approval (and possibly a resource Consent), which have been processed by your local Council, and have been collected and are available to us to read before we get too far into the works. These Approvals must remain accessible on site at all time for the duration of the construction process. Find a weathertight location outside.

 All in-ground swimming pools require Building Approvals, and sometimes even Resource Consents. We will apply for the Approvals as part of our contract, but all Site Plan drafting & presentation, Council fees, Resource Consent approvals, or Resource Consent Application Fees, PS4 costs are your responsibility to pay invoices as required.

 If there is damage (even slight) showing on the footpath and road crossing outside your property, we advise you to take several digital photographs now and file for future reference so that you don’t jeopardise the return of your Compliance Bond money if Council insists on replacing the footpath crossing at your cost due to damage.

● At the pre-installation site meeting, you will meet our **Installation Crew, your Excavator driver and our Site Manager or Salesman**, who will be your contact with us from this point on. Details of the pool are discussed and confirmed so that the excavator driver and Installation Crew understand what is required plus any extra arrangements made between the Salesman and yourself will be discussed.


● On the starting day, the Installation Crew will arrive, the excavator and trucks if required will arrive, the pool outline will be marked out and confirmed by you as the correct location and height above grade according to your wishes and the Building Approvals and excavation will commence. Within the next day or two, all of the pool wall shutters and filtration components will be delivered from Cascade to us. The excavation will typically take between one and two days, pool size dependent. The Aqualux interior liner is not manufactured yet, and will be measured up when the shell is complete to be tailored exactly to your individual pool, so start thinking about colour and pattern and tell the Site Manager of your choice so he can order the Liner from Cascade.


 **Progress Payment Due** At this time the “First Progress Payment” of 85% is due, as in the next few days, you will have 85% of the pool completed. These funds will be used to purchase all the components used over the next five days. As you are responsible for the digging & soil removal costs, the excavator company will give you an invoice in due course.

● If Soil removal requiring truck hire is involved, We can arrange this on your behalf, but remember that all excavation & soil removal is charged directly to you. Expect to pay around \$120 + GST per hour/per truck, plus tip fees where applicable. Normally two trucks will be needed. If there is any question of the strength of your or neighbour’s driveway then you must get the excavation company to use a small rubber tracked machine such as a Mustang to transport the excavated soil to the trucks waiting on the roadway outside your home. This will be added to their invoiced amount to you. We tried “tailoring” truck hire to the actual hours needed, but this didn’t work out: They expect a “full day’s hire” and charge accordingly.


● We are unable quote for removing any underground obstacles, such as rock etc. in advance of discovering it. If such a problem is encountered, the excavation companies verbal estimate will be given to you for the costs of removal and - if required - we can indicate the cost of rebuilding the pool base with cement stabilised hard fill. Underground obstacles are not commonly found in most suburban areas, but some areas are renown for rock and scoria.

In agreeing to our Terms & Conditions of Sale, you accepted liability for all costs relating to the pool excavation. When the basic pool excavation is completed, drainage trenches and filtration line trenches are excavated. The Installation Crew will commence the installation of the large galvanised steel 'sacrificial shutters' - the metal formers provided by Cascade that will contain and shape the concrete. This process generally takes about two to three days, and will result in a 'skeleton shape' of your proposed swimming pool. Any queries or comments regarding the pool shape, size, depth etc. must be made at this stage before any concrete is poured but remember, your pool liner may have been ordered based on your original instructions, and may be already in production by ABGAL Australia, so that process cannot accept any late changes. Ask to see Coping samples now, if you haven't already, as often they may need to be made for you specially, and will be needed within two weeks or so.

 Please be fully aware that the shape of the pool and the depth and contour of the pool takes place at this time, so you either must be there - or have explained fully to the Installation Crew EXACTLY what you expect from the pool shape & depth.

 Take time to observe the pool when it is ready for concrete - because once the concrete is placed YOU OWN IT! The pool CANNOT be changed once the concrete has been poured - unless you are prepared to pay many thousands of dollars to cut it out and start again! This is a vital stage of your pool construction to take notice!

● The Building Approvals including Site Plans must be kept handy and available on site for both the Crew and Council Inspectors. Approvals will be subject to various Council Inspections - typically they will want to inspect the fresh excavation, steel placement & tying, and plumbing & drainage. Technically there is no 'Plumbing' or 'Drainage' - just the pool recirculation system and backwash which terminates in an "air-gap" over a handy gully trap. Finally the pool fencing Inspection confirms fencing comply with the Fencing & Building Act which includes self-closing, self-latching doors between the pool and house and windows must be restricted to a 100 mm maximum gap. Be sure that the Inspector signs off the plans, or you at least note the inspection dates on the back page of this manual. This is IMPORTANT!


 Even if it is not "required by Council", we have experienced occasions where - some years down the track the Council "has no record of an inspection taking place" and refuses to issue a final Compliance Certificate and return your Bond - sometimes even requiring the pool sides to be dug up to "inspect" wall bracing and drainage! It is incumbent upon you to ensure that a complete record of inspections is kept on hand.

□ Once the "steel fixing" has been approved, the premixed 25 mpa 'Shotcrete' concrete can be pumped into the steel wall formers, and the pool floor is "Hand Plastered" to a smooth finish in one continuous pour. As a hand-finished product there will be variations and slight hollows in the levels. This will not be noticeable when the pool is filled and do not affect the quality of the job. The concrete must then "Cure" - a process that takes a minimum of 14 days to achieve 85% and 21 days for 100%. In hot summer days, the concrete should be "hosed down" by you several times daily to stop *premature curing* and stress cracks forming. Stress Cracks are not a problem, as the pool liner covers over them, and are only 'skin deep'.

The curing period gives your other sub-trades the opportunity to install decking, paving pool fencing and whatever landscaping arrangements you have made, so be sure to advise them of this opportunity.

● When the pool liner arrives, the Installation Crew takes a full day to vacuum fit, check the fit is tight at important points and fill the pool with water from a handy fire hydrant. We often purchase the pool water from the Local Council for this purpose and the cost is included if shown on your Agreement. Water Tankers bringing fresh water are commonly needed where there are no fire hydrant outlets close to your home, and so is at your cost.

When the pool is filled and filtering, the Installation Crew will "balance" the pool water by adding Hardener (Calcium Chloride) to increase the hardness to 200 ppm (parts per million) and Water Conditioner (Sodium Bicarbonate) to increase the Total Alkalinity to 120 ppm. These compounds are basically "chalk" and "baking soda" and are compounds that are harmless to humans: they are simply added to buffer the new pool water against sudden changes in pH of the water. The special Aquagenie Tablets supplied will be added to the Aquagenie canister (if an Aqua genie is fitted) and the Crew will give the pool a dose of Granular Chlorine to 'shock dose' the new pool water. Please Note: The pool copings (edging stones) are NOT INSTALLED at this point, as the pool needs a week or more to "settle down" before they are fitted to the rigid pool walls.

 **Progress Payment Due** The "Second Progress Payment" of 15% of the Net Contract Price is now due. You and your children will soon be swimming in - and enjoying - your own CASCADE swimming pool!

□ Our pools are mostly 'non chlorine' so the PROZONE generation unit will be started in the next few days and the first dose of OZONE ASSIST added at this point. It is quite normal to see bubbles at the pool surface in front of the Aquagenie and if you have pool lights fitted, at night with the lights on you will see "millions" of little micro-bubbles of Ozone keeping your pool safe and sterilised for you and your children to enjoy. This continues your safety for the next few hours after the filtration timer switches the system off, as the bubbles slowly percolate up to the surface to recombine to become molecules of pure oxygen again! Pools never smelled this good!

□ Normally, our Coping Installer arrives about one to two weeks after the pool is commissioned, and will fit the pool copings that you have chosen. On special occasions, where expediency is required, pool copings are installed in the initial stages of the installation as this process allows the other sub-trades to press on with their jobs. These pools are fitted with "Hung Liners" and Cascade pools may have either Hung or the more common method referred to as "Registered Liners". Either method still employs the Vacuum Fit process.

**i** NOTE: During this delay waiting for the coping installer, it is important that you keep your pool "healthy" by looking after the water. If an Aquagenie Skimmer is fitted, ensure the Tablet Canister contains sufficient tablets for your pool - usually 2 to 4 tablets if an OZONE unit is fitted - otherwise 10 - 12 tablets. Periodically check the pool water for clarity, and if it looks at all murky increase the filtration time to 12 hours and add some of the Chlorine we have left with you - either 2 Liters of Liquid or about 2 coffee-size cups of Granular Chlorine.

## **X WE RECOMMEND NON CHLORINE POOLS! OZONE is a FAR BETTER SYSTEM!**

**DON'T OVERDOSE with stabilised Aquagenie tabs! Never fill the canister up completely!**

**DON'T EVER break up the large "Horse Pill" 3 inch (75mm) Tri-Chlor tablets to fit the cannister - this action could cause them to explode in your face! Use the CORRECT tablets available from Aquatech**

**DON'T EVER put those large Tri-Chlor tabs in the skimmer basket! Damage to your filtration equipment and pool liner will eventuate, and any Warranties will be invalidated!**

**DON'T OVER-CHLORINATE YOUR POOL by adding too much liquid or powder chlorine. Chlorine is a strong bleach and may cause wrinkles or damage your pool liner if too much is added. Never exceed 3.0 ppm of Free Available Chlorine!**

- Swimming Pool water will be "Balanced" when the pH reads 7.6 (7.4 - 7.8 is OK), Total Alkalinity reads between 100 - 140 (120 is Ideal), and the calcium hardness is around the 180 - 220 mark.

**i** Please read the chemical treatment section of the Pool Owner's Manual to familiarise yourself with the correct procedures. It is preferable to run the pool filtration 24 hours per day until the copings are fitted and your surround work is completed - if it is not a nuisance to your neighbours .

**i** If there are any points about which you are unsure, please CALL US IMMEDIATELY - as a pool can "go off" really quickly in hot weather, and takes days (and Dollars) to get right again. WE CAN NOT STRESS THIS POINT ENOUGH! It is your responsibility once the pool is filled!

- Go to Page 4 to confirm your pool cover order. We wait until your surrounds are finished before delivering and unrolling it to avoid damage from a rough site. Bubble Covers will shrink approximately 1% or 150 mm in length over the next few weeks, so don't trim it to final size before then. If you need help trimming it, please call us, and we will come and do it.

- Finally, when the copings have been installed, allow at least a week before letting anyone step on them. If you are having decking or concrete paving installed, be sure to use qualified people who will appreciate the need to allow an expansion gap between their work and the pool copings. The copings are designed for people sitting and stepping on, and not lateral force exerted by expanding timber decks etc. We are now finished, and the pool is ready for you to enjoy. We will come and give you a comprehensive training session. If you feel that the training session, manuals and videos aren't enough, call us and a further training session on the maintenance of your Cascade swimming pool will be given at a time to suit you.



Progress Payment Due

The "Final Payment" or retention payment of \$375 is now due, so please

transfer it by the 20th of the following month as we now have completely finished your Cascade swimming pool.

Please be aware of the Aquagenie overflow: By allowing water that reached the duct level to soak into the pool drainage, it will stop your pool from ever “overflowing”. It drains out of the pool and into the hydrostatic drainage area around the pool perimeter. It’s easy to overlook this duct and have the concrete surround you are having poured block the duct and thus allowing the pool to fill to the top of the copings. This is no a good thing!

Also, the hydrostatic pool drainage around the pool may lead off to a downhill area where possible, so keep an eye on the place this discharges out, as it’s easy to forget when you may add an outbuilding or wall over the top of it thus stopping it from draining the pool area.



Caring for a swimming pool can be quite simple, depending on your attitude! You already have a huge advantage over other pool types by installing a CASCADE pool, but there ARE a few trade-offs which you must be aware of!

(a.) pH is critical to all swimming pools, as both an ALKALINE or ACID WATER situation can harm both swimmers and pool equipment. Your CASCADE pool is no different - so KEEP THE pH in the correct pH ZONE!

(b.) The Aquagenie has a self-dewatering duct that stops the pool from overflowing. BE AWARE of this when installing any concrete pool surrounds! DON'T BLOCK IT OFF!

(c.) The entire pool has a hydrostatic relief drain around the outside, which (usually) leads off to a lower area to allow groundwater to drain away and eliminates any hydrostatic pressure on the pool liner. Don't allow the discharge point to become BLOCKED UP or hydro pressure could cause a problem!

If you don't “get it” the first time, don't worry: by reading this Pool Owner's Manual and watching the YouTube Videos listed in the Pool Owners Club on the Cascade website, (PW = “poolclubmember”) it should not be too difficult for you to understand. If in doubt: Call us!

Don't be tempted to “hand off” your pool to a local pool shop - unless they are AUTHORISED by CASCADE to administer to our pool type. Many pool shop personnel have NO IDEA how to treat a non-chlorine pool with an Aqualux printed pattern interior, and much of their advice is NOT RELEVANT to an OZONE treated pool that has NO SIGNIFICANT CHLORINE in the water.

Pools shops exist solely to SELL YOU STUFF! - so CHECK WITH US first before you add a whole bunch of stuff sold to you by a pool shop! - much of which may be totally unnecessary, or even damaging to the Liner! We are trying to avoid pool chemicals - including Chlorine - so stick to our OZONE ASSIST regime to avoid potential problems with chemicals. If you get stuck, a TOLL-FREE call to our office (0800) 227 223 will soon get you on the right track. Thank you, and enjoy your new Cascade swimming pool!

Regards,

A handwritten signature in blue ink, appearing to read 'Larry', with a horizontal line underneath.

Laurence E (Larry) Ogden - Dip Pool Tech NZMPBG (Hon) Certified Builder License #108/2021  
Manager - Franchised Dealers and Sales Agents

*Cascade pool wall components are manufactured and distributed by:*

**CASCADE INDUSTRIES LIMITED**  
Unit 2, 134a Marua Road, Ellerslie AUCKLAND 1501



Sally Says:



"Check the  
contents of the  
Handover Kit!"

**THE SMALL POOL COMPONENT KIT  
DELIVERED TO YOU INCLUDES A SEALED  
BOX WITH A LABEL THAT SAYS:**

**"GIVE THIS TO THE CUSTOMER"**

**OPEN IT**

**CHECK THE CONTENTS AND STORE  
THEM IN A SAFE PLACE!**

**These Items are small and expensive, such as  
LED lights, light transformers, pool cleaning equipment, an  
electronic time clock and other important items that can  
easily be lost or 'misplaced' !**

**KEEP THESE ITEMS IN A SAFE PLACE UNTIL THE  
INSTALLATION CREW ASKS FOR THEM!**

**If any items are subsequently lost or misplaced  
you will be charged for a replacement!**

Sally Says:



"Don't let other trades damage your new pool!"

## **IMPORTANT NOTICE!**

**ONCE YOUR POOL IS "FILLED & FILTERING"  
and the NEW COPINGS are installed,  
IT'S**

**YOUR JOB  
TO KEEP THE POOL  
CLEAN AND SAFE FROM OTHER  
CONTRACTOR'S RUBBISH**

**AND**

**YOU MUST KEEP THE CHILDREN  
OFF THE NEW COPINGS FOR AT  
LEAST A WEEK!**

**ENSURE THAT "OTHER TRADES" DO NOT CONTAMINATE YOUR NEW SWIMMING POOL - APART FROM THE  
DAMAGE THAT MAY OCCUR FROM THEM DROPPING STONES, ROCKS, BRICKS, TIMBER ETC  
THAT MAY DAMAGE OR STAIN THE POOL INTERIOR**

**IF WE HAVE TO RETURN SEVERAL TIMES TO REFIT LOOSE COPINGS or CLEAN THE POOL  
THIS WILL NOT BE A FREE SERVICE.**

**ANY ENSUING DAMAGE IS NOT COVERED BY YOUR WARRANTY!**

Sally Says:



"The AQUALUX interior is tough & robust and will cove into shape!"

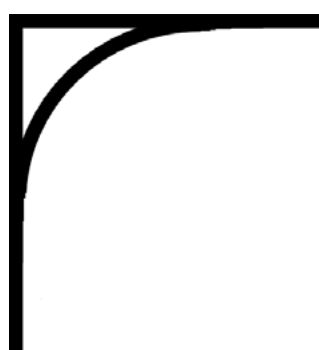
## FOR YOU INFORMATION!

**Our ULTIMATE POOL is a robust high-density concrete pool with a long-lasting flexible interior that is very tough & durable!**

The liner will be a tight fit and 'hard up against' wherever it touches the hard surface of the pool. Where there are right angles between vertical wall to floor and in the corners, the material will form a slight coved shape. This is normal as the material spans the two adjacent right-angle surfaces.

This is normal and the tough & durable liner material is not going to be vulnerable in normal use of the swimming pool. This may also be noticed at the corners of rectangle pools. This is a feature of the Aqualux interior pools, and you will not damage the liner by standing on the coved area.

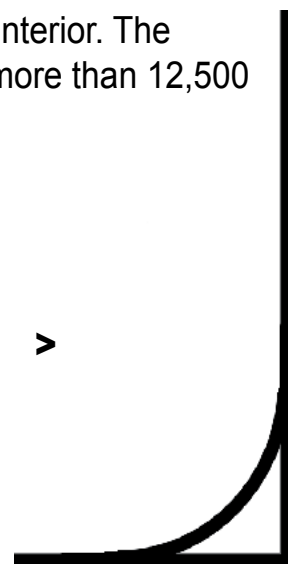
The illustrations below give you an idea of what is normal for this type of pool interior. The Guarantee of the liner is not affected by this feature, and in the installation of more than 12,500 swimming pool interiors has never yet proved to be a problem!

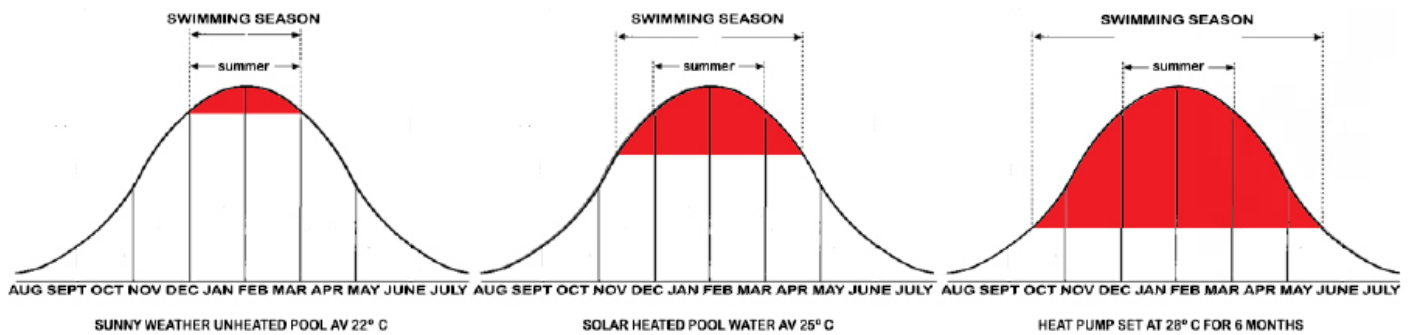


< **Corner**

70mm - 90mm

**Wall to Floor junction** >





## YOUR NEW SWIMMING POOL IS A BIG INVESTMENT! DO YOU WANT TO USE IT ... OR JUST LOOK AT IT?

The seasonal Bell Curves (above) shows the potential use you could get from your pool. This graphic shows typical temperatures for the North Island, with annual temperatures ranging from 5° C to 28° C

Pool temperatures generally follow the air temperature - but lag behind 10 or 15 days: If we have a 'warm spell' of 28° C for two weeks, the pool will eventually 'catch up'. A 'nice' swimming pool temperature is 28° C.

An unheated pool will usually reach the average air temperature for only a short period each year, so to enjoy an extended swimming season in your new pool, you should consider adding an external heat source for it.

- Solar heat is a great source of pool heat, but can't be relied on to 'be there for you' when you want it. A Solar Thermal Bubble Pool Cover will give you a 2° to 4° degree boost if left on while the sun is shining (and at night)
- Conventional roof-mounted Solar Panels will give your pool a boost when the sun is shining but may require an expensive set-up to provide what you want - and can't be relied on for a guaranteed warm pool if the weather does not cooperate!
- A Heat Pump is a good method of extracting the 'Free Heat' from the sun by using the ambient air temperature to extract heat even when the sun is not shining. It converts 'input to output' at a 4:1 or more ratio: 2Kw in becomes 8Kw in heating ability!
- Cascade takes advantage of these dynamics, by suggesting the 90mm INFILLFOAM pool wall insulation as a 'must have' option (cuts your heating cost by up to 80%), and a Thermal Bubble Cover that adds heat during sunny days, and retains heat at night!

Many pool owners start their swimming season soon after the average Spring temperatures consistently reaches 20° C. A Heat Pump with a + 10° range will reliably convert the pool to a comfortable 28°. Adding a Thermal Bubble cover will boost the sun's effects, and eliminate 92% of heat loss into the cooler night air!

As the average daily temperature increases, the job of the Heat Pump lessens as the difference between the desired temperature and the air temperature reduces. Soon - especially in the heat of Summer - the Heat Pump may not need to come on at all!

SO ... USE YOUR POOL AS MUCH AS POSSIBLE! Your Family Health & Lifestyle improves, and your kids will love you for it!





## WHY DO WE RECOMMEND OZONE? CHLORINE STINKS!\*

Ozone applications: Purifying Swimming pool water - "good enough to drink!"

Water quality can be improved eminently and costs can be saved on the long term when ozone is applied for swimming pool water treatment. Pool finishes will last longer, and maintenance reduced.

These are the main benefits of ozonisation:

- Substantial decrease in chlorine use - up to 85% or more
  - Improval of the filter and coagulant (i.e. dirt trapping) capacities.
  - A reduction of coagulant use (less media changes) and less backwashing of the filter required
  - Water useage can be decreased, because of an increase in water quality
  - Ozone oxidizes organic and inorganic matter in the water
  - No unwanted byproducts - such as chloramines (which cause a chlorine-smell)
  - Chlorine smells are fully diminished by ozone application
- Ozone is a more powerful oxidant and disinfectant than chlorine - removing 100% of germa & bacteria. Chlo-rine-resistant pathogens (Crypto, Guardia etc) cannot multiply in water that is treated with ozone

Because of its strong oxidation and disinfection mechanism, ozone is very suitable for swimming pool water treatment and eliminating swimming pool water pollutants:

Swimming pool water pollution is mainly caused by swimmers. They creatge a very dynamic pollution, dependent on the number of swimmers. Swimming pool pollutants can be divided up into three groups: microorganisms, undissolved pollutants and dissolved pollutants.

Each swimmer carries a large number of microorganisms, such as bacteria, fungi and viruses. Many of these microorganisms may be pathogenic and can cause disease. Undissolved pollutants mainly consist of visible floating particles, such as hairs and skin flakes, but also of colloidal particles, such as skin tissues and soap remains. Dissolved pollutants can consist of urine, sweat, eye fluids and saliva. Sweat and urine contain water, but also ammonia, ureum, kreatine, kreatinine and amino acids. When these substances are dissolved in water, they cannot harm swimmers, however, when these compounds react with chlorine in swimming pool water, incomplete oxidation can cause chloramine formation. This causes the so-called chlorine-smell, which irritates the eyes and respiratory system. In a number of cases, stable compounds can be formed, which can only be removed from swimming pool water by water refresment ( ie empty and refill the pool).

Because of its strong oxidation and disinfection mechanism, ozone is very suitable for swimming pool water treatment, and less costly than chlorine to maintain a safe swimming environment for your family.

Go to this page => <http://www.cascade.co.nz/LennTech/lenntech.html> for the full article

\* Actually, Chlorine is a colorless, odourless gas.

What you can smell is the by-product of incomplete oxidisation of nitrogen-based matter, termed Chloramine.



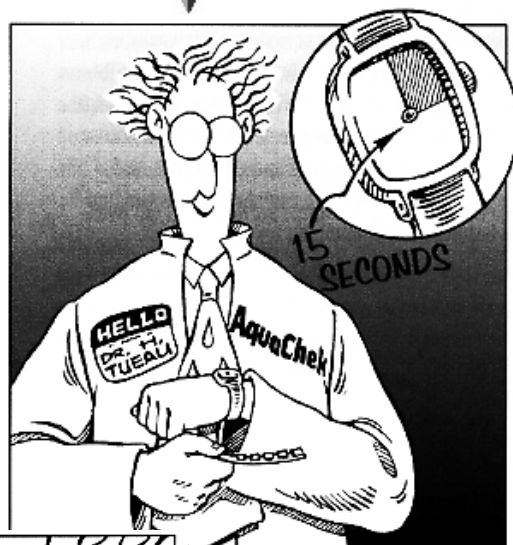
# 5-in-1 test strips - because, We're all busy these days ...

The 5-in-1 test strip is the answer to busy people. No longer do you have to:

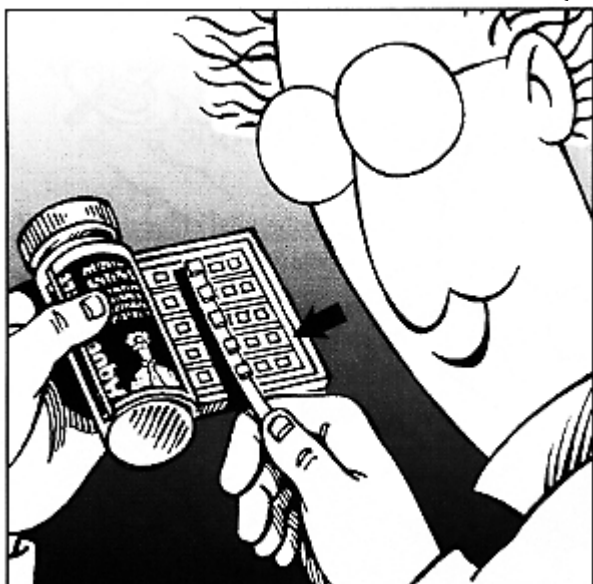
Dip the Strip, then



Hold flat  
for 15 seconds.....



Compare colors to sample



Log the results!



Easy, isn't it!

Remember that the recommendations in the US AquaChek manual may differ from ours. **Use ours!**

## 5-in-1 test strips - because, We're all busy these days ...

The 5-in-1 test strip is the answer to busy people.

No longer do you have to:

- ✗ Go to pool and get a water sample
- ✗ Sit down and gently pour the water into the testing container
- ✗ Add one chemical ...
- ✗ Then another ...
- ✗ Shake the solution ...
- ✗ Compare the result with chart



Now, with the 5-in-1 test strip it's a whole new ball game.

Simply dip a strip into the pool, and you're almost done! hold the strip level with the comparator, and that's it!



**Note: Test Strips are NOT as accurate as the "Chemistry Set". Use them for comparative testing only, once you have established a bench mark. Also, they get "past dated". Check the botom of the container for USE BY date.**

# WATER TEST LOG

Spare copies of this page are available to download from the pool owner's club - [www.cascade.co.nz](http://www.cascade.co.nz)

[illegible]



Sally Says:



"NEVER throw  
Pool Chemicals  
directly into the  
pool water!"

# **NEVER THROW POOL CHEMICALS DIRECTLY INTO THE POOL WATER!**

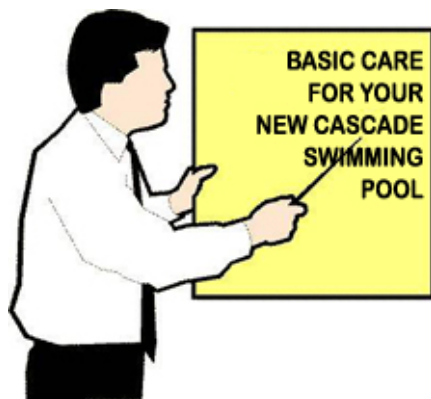
**CHLORINE IS A BLEACH, and  
adding into the pool may wrinkle the  
liner, fade the print pattern, damage  
the surface and shorten the liner life**

**Add all pool chemicals into the skimmer while the filter is running. Disregard  
any pool chemical instructions saying to broadcast chemicals into the pool!**

**PUTTING THOSE BIG CHLORINE TABLETS IN THE  
SKIMMER BASKET WILL QUICKLY DESTROY  
YOUR POOL PUMP**

**USE ONLY CASCADE CERTIFIED POOL CHEMICALS  
Available from Aquatech Limited (09) 636 9921  
and the pool owner's club.**

**NEVER EVER MIX ANY POOL CHEMICALS TOGETHER!  
EXPLOSION, FIRE & SERIOUS INJURY MAY FOLLOW!**



**1. Using the “Chemistry Set” pool water test kit** - Please refer to page 22 of this manual.



**2. Checking the Pool Filter pressure gauge** to see if it needs a backwash.

Note the initial reading on your pressure gauge first started by the Cascade installer. When first started, the pressure gauge will read the optimum pressure for your pool (usually from Zero to 2.5 Kpa) When the pressure increases by 1.0 kpa or goes into the RED ZONE it's time to BACKWASH your pool filter.

If you have Electrostatic Glass Bead filtration, backwash the Filtration Tank periodically - say twice a year. Regular FM Micromedia may need backwashing more often, three times a year or more.

- Turn OFF the power, rotate the MPV Handle (on top of the tank) to the Backwash position
- Turn ON the power. Wait (1 - 3 minutes) until the water through the sight glass provided runs clear
- Turn the power OFF. Turn handle to RINSE, power ON for 5 seconds, power OFF
- Turn handle to FILTER position, power ON! Congratulations: you have just backwashed your filter!



### 3. Checking and emptying the Hair & Lint Strainer.

The “Hair & Lint Strainer” is located at the front end of the pool pump. (See RED Arrow at left) It has a clear PVC lid that means you can see if it needs emptying or not. Unless it “looks” more than half full, it may not be necessary to do anything. If you have to empty it, remove the clear lid carefully. If it has been put on too tight, you may need a tool or length of wood that fits the casting to add leverage, but do not re-tighten it too much when you replace it. Hand-tight is generally OK. It will have a round neoprene “O” ring under the lid, so be sure to give this a wipe clean and replace it carefully or the pump may not “prime” if air gets sucked into the bowl. Using a little Vaseline helps to make the O ring air-tight!



### 4. Checking the OZONE unit:

If the GREEN LIGHT is ON and there are BUBBLES in front of the Aquagenie: It's Working! Check the position of the suction gauge.

### 5. Vacuuming the swimming pool:

Often, if the pool “looks like” it may need a vacuum, you can simply give it a good brush using the blue Pool Brush (shown at right). This will swirl any floor debris up into the pool water, and the Aquagenie might be able to do the job for you. Check if the pool is still in need of a vacuum the following day: If so, here is what you do:

- Connect the 2.4m extendable Vacuum Handle to the Vacuum Head and click into place
- Connect the flexible blue Vac Hose onto the 40 mm male fitting on the top of the Vac Head
- Place and seal the Vacuum Plate (it's the dinner-plate size thing with a hole in the middle) into the skimmer water on top of the Skimmer Basket. You may want to turn off the pool pump first, and you certainly WILL have to when removing it
- Lower the Vac Head (and vac pole) into the pool, and feed the Vac Hose down into the pool so it fills with water. When you are sure it's full, plug it into the hole in the Vac Plate. Turn the pump back on if it's off. The MPV must be set to FILTER. Slowly “hoover” the pool floor, trying not to stir up the debris. If the suction stops after a while you may have to halt awhile to backwash the filter (if the pool is REAL dirty the Pressure Gauge will be in the RED zone). Backwash to WASTE until the discharge runs clean, then rotate the lever back to FILTER to continue. Remember to always **TURN THE PUMP OFF** when changing the MPV lever position.
- When you are satisfied with the job, unplug the vac hose etc. and store out of the sun.



**6. Lowering the pool water down? (DONT!)** The pool has a self-levelling device built into the Aquagenie. Providing the person installing the concrete decking has been told to NOT COVER THIS PVER, it will keep the pool from ever filling right up.

**7. Cleaning the dirt ring off liner** around the water level: Use a green (Plastic) Scotchbrite Pad and NO SCRATCH Jiff

Other maintenance items are available on the Cascade Pool Owner's Club web site

As a Cascade pool owner, you are automatically enrolled in our Pool Owner's Club - and can purchase all chemicals and accessories at discount prices. Log onto [www.cascade.co.nz](http://www.cascade.co.nz) - navigate to Pool Club web page. Password is “poolclubmember” (lowercase, no quotes) Chemicals can be couriered to Auckland customers.



## **SAFETY WITH POOL CHEMICALS**

**Pool chemicals can be injurious and damaging if not handled correctly and in particular if not kept out of the reach of children. It is very important to familiarize yourself with the following guidelines.**

- a. Never mix chemicals together, not even different brands of same, particularly granular chlorine.
- b. Never use pool chemicals in conjunction with household cleaners and detergents.
- c. Never roll or violently agitate containers of granular chlorine. Always keep them tightly closed and away from naked flame. Failure to observe these simple precautions can lead to fire, explosion or the production of poisonous gases.
- d. Keep all chemicals in a locked dry area out of reach of children. Always use clean dry utensils for measuring pool chemicals. Note: it is recommended practice to reserve a measuring device specifically for each type of chemical.
- e. When adding chemical and water solutions to the pool do so carefully holding the liquid container close to the surface of the pool to avoid splashing skin or clothing.
- f. Always wash hands thoroughly with soap and water after using all chemicals.
- g. All acids should be handled with great care. Always add acid to water NEVER water to acid.
- h. Always check labels thoroughly before use. Similar looking labels can lead to the use of the wrong chemical with resultant harmful conditions.
- i. Change test kit reagents every 12 months or sooner. The use of old reagents can lead to inaccurate tests and wrong dosages.
- j. Familiarize your family with antidote treatment and first aid procedures in case of chemical accidents. Some first aid procedures are mentioned elsewhere in this booklet.

Remember that pool chemicals when treated with respect are beneficial products, which will ensure healthy water conditions and the health and safety of swimmers.

## **DONT'S**

**✗ NEVER MIX DIFFERENT POOL CHEMICALS - AN EXPLOSION AND SEVERE BURN INJURY WILL RESULT!**

**✗ DO NOT ADD ANY CHEMICALS DIRECTLY INTO THE SWIMMING POOL!**

- **LINER DAMAGE OR PATTERN BLEACHING MAY OCCUR!**
- **YOUR LINER WARRANTY WILL BE INVALIDATED!**

**✗ DO NOT PUT THOSE BIG TRI-CHLOR TABS INTO YOUR SKIMMER BASKET!**

**✗ DO NOT OVER-CHLORINATE YOUR POOL WITH THE COVER ON!**

- **LINER DAMAGE OR PATTERN BLEACHING MAY OCCUR!**
- **YOUR LINER WARRANTY WILL BE INVALIDATED!**

**✗ DO NOT STORE POOL CHEMICALS NEAR PETROLEUM BASED PRODUCTS**

**✗ DO NOT SMOKE, OR ALLOW FLAME OR FIRE IN THE VICINITY OF CHEMICALS**

**✗ DO NOT STORE POOL CHEMICALS WHERE CHILDREN MAY ACCESS THEM!**



Sally Says:



"Don't block  
the pool over-  
flow!"

# **AQUAGENIE SKIMMERS have an overflow which prevents the chlorine cannister being flooded**

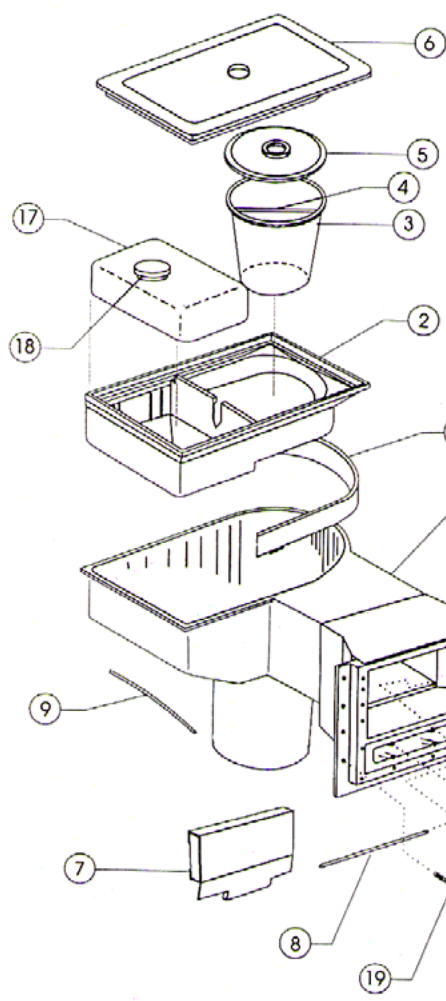
**When you have your surrounds installed be  
sure that this is not blocked!**

**In winter the pool might overfill if the overflow is blocked.  
This releases concentrated chlorine out the  
skimmer front, which may damage the pool liner!**

**SO YOU NEVER HAVE TO LOWER THE POOL DOWN IF IT  
FILLS UP WITH RAINWATER - SO DON'T!**

## The AQUAGENIE SKIMMER

Fitted to all 'CASCADE' Ultimate pools since 1996, the Aquagenie is a major breakthrough in pool care and chlorination, especially when used in conjunction with the Ozone generator.



The Reservoir contains a canister that will take Tri Super 90 stabilized chlorine tablets. The usual quantity for the average 5 x 10 m pool is 8 - 12 in a pool that runs 12 hours daily in summer months when the Tabs are the primary sterilisation source, and 2 - 4 tabs when the Ozone is the primary source. Experimentation to find the right dose is needed, as each pool is different.

The reservoir is fed by pressurized water taken from the plenum chamber in the front of the skimmer. This chamber is pressure fed by the pool pump, and directs a sheet of water down and out from the skimmer front, keeping the pool floor clear at this point. The action of the rapid water discharge causes the pool surface to rotate towards the skimmer weir, thus creating a flow of water that quickly traps and leaves etc. that fall onto the pool while the filtration is operating. Thus an Aquagenie-equipped pool will remain far more clean (and sterile) than a pool equipped with a standard skimmer.

Maintenance is low, just be careful when removing the skimmer basket that you do not snag the feeder tube and break or dislodge it. Also, check that the reservoir is being fed water by looking periodically into the skimmer top to see that the flooded reservoir is actually spilling out into

the water flow through the skimmer.

Sometimes the hose that feeds the water into the reservoir will become dislodged - or even broken or perished. Some models had a small PVC fitting that was easily broken while removing the skimmer basket! Replacement hoses and fittings are available for a few dollars from Aquatech Industries (09) 636 9921

## A few Aquagenie “don’ts”:

- ✗ Don't use the larger 3" TRICHLOR tabs in the Aquagenie - especially don't break them to fit the canister! Use **ONLY** the Tri-Super-90 "Oddfellow sized" tables available from Aquatech or the on-line Cascade Pool Owners Club.
- ✗ Don't ever use TRICHLOR tabs in the skimmer basket, they will wreck your filtration!
- ✗ The Aquagenie has a built-in overflow leveler - **DO NOT** infill around the skimmer with concrete or any product that will restrict this overflow. If pool water is allowed to flood up and cover the reservoir, highly saturated chlorinated water will flow out the front of the skimmer when the pump stops, and may cause bleaching damage to the pool liner. **THIS IS IMPORTANT!**
- ✗ Don't let the "slot" in the front of the skimmer become blocked with debris - periodically check that the water flow is not impeded by obstructions that have passed through the filter and became stuck.

# 'Lifetime Warranties'

A 'Cascade Pool' is the generic appellation for an engineer-designed water retention structure comprising selected prefabricated hardware components provided by Cascade Industries Limited, combined with on-site materials including high-density concrete and reinforcing steel and fitted internally with an ABGAL waterproof membrane. Franchise agents ("the Vendor") market and install the various constituents to create the structure referred to as a 'Cascade Swimming Pool'. As such the Vendor in his own cognisance contracts to the end user (the Customer) in compliance with the Sale of Goods Act 1908 and complies with the Consumer Guarantees Act 1993 for acceptable quality and durability. The Vendor believes and anticipates that the 'Service Life' or 'Lifetime' of the various components comprising the pool shall be herein defined as:

**50 YEAR SERVICE LIFETIME: ULTIMATE STEEL-REINFORCED CONCRETE POOL SHELLS** carry a 'Service Life' expectation of up to fifty years when constructed in normal non-acidic soil conditions.

**25 YEAR SERVICE LIFETIME: ABGAL'S Aqualux™ .770 mm INTERIOR PVC Thermoflex** specifically designed for home swimming pools, will remain free of manufacturing defect and remain structurally intact for its expected service life of TWENTY-FIVE Years subject to the exclusions (below).

**15 YEAR SERVICE LIFETIME: - 'Series 70' .50 mm INTERIOR** will remain free of manufacturing defect and remain structurally intact for a period of FIFTEEN years subject to the exclusions (below).

**10 YEARS SERVICE LIFETIME:- FILTER TANK** The filtration tank is guaranteed against manufacturing defect for ten years providing that it is protected from chemical damage & elements.

**5 YEARS SERVICE LIFETIME:- FILTERMASTER PROZONE UV BULBS** will remain free of manufacturing defect and remain operational for a period of FIVE years - not including replacement labour cost

**3 YEARS WORKMANSHIP - INTERIOR MOSAIC TILE BANDS, POOL COPINGS, PLASTER FINISH SURFACES, WORKMANSHIP & INSTALLATION** carry a workmanship warranty that they will remain free of non mechanical defect for a period of Three Years.

**3 YEARS SERVICE LIFETIME:-MPV, POOL PUMP, OZONE GENERATORS** are guaranteed against premature failure or manufacturing defect for Three Years providing that it/they is/are protected from weather & elements and not damaged by any action or inaction of the Customer.

**1 YEAR SERVICE LIFETIME:- THERMAL BUBBLE COVERS, LED POOL LIGHTS,** voltage transformers are guaranteed for One Year. QH pool light bulbs will be replaced by the Vendor if they fail within twelve months of the date of the pool handover. LED lights have varying lifetimes: check the accompanying documents.

**EXCLUSIONS:** Warranties are voided if non 'Cascade Approved' or supplied sterilisation processes are followed that are not recommended in the Pool Owners Manual. **Pool Shell:** Physical damage, partial or catastrophic failure due to site subsidence, hydraulic undermining, earth subsidence, earthquake, electrically induced corrosion, salt water, 'Forces Majeure' or any other unforeseen circumstances void this undertaking. **Pool interiors:** Physical damage, piercing or cutting, inappropriate chemical treatment or abuse, fading or colour change, chemical wrinkling, low pH symptom, or any other effect resulting from failing to precisely follow Cascade's Ozone pool water maintenance regime, mistreatment or causes beyond the control of the Vendor. **Metal Wall Modules:** Guarantees are voided if the pool is fitted with any type of Saline Electrolysis Device or sterile system other the Ozone unit provided by Cascade Industries Limited unless a further treatment of Polyester Powder-coating is undertaken on certain components by Cascade Industries prior to installation of the component. **Pool Equipment:** Physical damage, components not installed in accordance with the Manufacturer or Agent's instructions and/or not protected from weather or chemical damage, pool pumps allowed to 'run dry' or suck debris. **OZONE:** Ozone units' lifetime voided if able to be operated independently of the pool pump, or allowed to vacuum water into the mechanism. **General:** Physical damage, installation not compliant with the provisions of the Building Approval issued by the Local Territorial Authority or in accordance with the Plans and Specifications of the Design Engineer and/or Registered Structural Engineer, who must issue a subsequent PS4 Compliance Certificate, or installed in unstable geotechnical, unsound acidic or well drained soils or not subsequently maintained in accordance with the guidelines for correct chemical procedures as per the Pool Owner's Manual provided by the manufacturer. **Accordingly,** the Vendor - in accordance with the provisions of the Consumer Guarantee Act 1993 - warrants and guarantees the above components performance for their expected quality and durability as found to be reasonable by a Court of Law. The Vendor, at its discretion, reserves the right of repair or replacement or any item deemed non-serviceable.

EMPTYING THE SWIMMING POOL WITHOUT PRIOR KNOWLEDGE & ADVICE FROM THE VENDOR WILL VOID ANY WARRANTY! ANY REPAIR REQUIRED MUST BE REFERRED TO THE VENDOR AND UNDERTAKEN WITH VENDOR'S AUTHORISATION BY AN AUTHORISED FACILITY. DOING OTHERWISE WILL VOID THE WARRANTY! GUARANTEES ARE SUBJECT TO LEGAL INTERPRETATION OF RIGHTS UNDER THE CONSUMER GUARANTEES ACT!

This Warranty is issued & validated by the Vendor and is conditional on full and final payment of all sums due or claimed by the Vendor for the construction of the swimming pool. Should any claim arise, under the terms of the Consumer Guarantee Act, you must contact the Vendor for advice of the process to be followed. Guarantees are limited to workmanship & mechanical defect and do not include "fair wear & tear". The Warranty period commences on the date of receipt of the final payment as per the Sale & Purchase Agreement, and will not be validated while any due payments are outstanding.

Pool installation/completion validated by: \_\_\_\_\_

Signed \_\_\_\_\_

Vendor's Company: \_\_\_\_\_

Contact \_\_\_\_\_

Being the Vendor or duly authorised Agent of the Vendor

Date \_\_\_\_\_

[illegible]





Sally Says:



"NEVER throw  
Pool Chemicals  
directly into the  
pool water!"

# **NEVER OVERDOSE ANY POOL CHEMICALS IN THE POOL THAT MAKE DRAMATIC CHANGES TO THE pH!**

**EXCESSIVE HIGH or LOW pH will  
cause wrinkles in the liner, fade the  
print pattern, damage the surface  
and shorten the liner life**

**Wrinkles and Faded Colour in the liner is  
CAUSED BY INCORRECT MAINTENANCE  
THERE IS NO OTHER REASON  
FIXING IT IS NOT A WARRANTY ISSUE!**

**PUTTING THOSE BIG CHLORINE TABLETS  
IN THE SKIMMER BASKET WILL  
QUICKLY DESTROY YOUR POOL PUMP**

**USE ONLY CASCADE CERTIFIED POOL CHEMICALS  
**NEVER EVER** MIX ANY POOL CHEMICALS TOGETHER!  
EXPLOSION, FIRE & SERIOUS INJURY MAY FOLLOW!**





**CASCADE**  
**POOLS**  
ESTABLISHED 1971

**0800 227 223**

**0800 CASCADE**