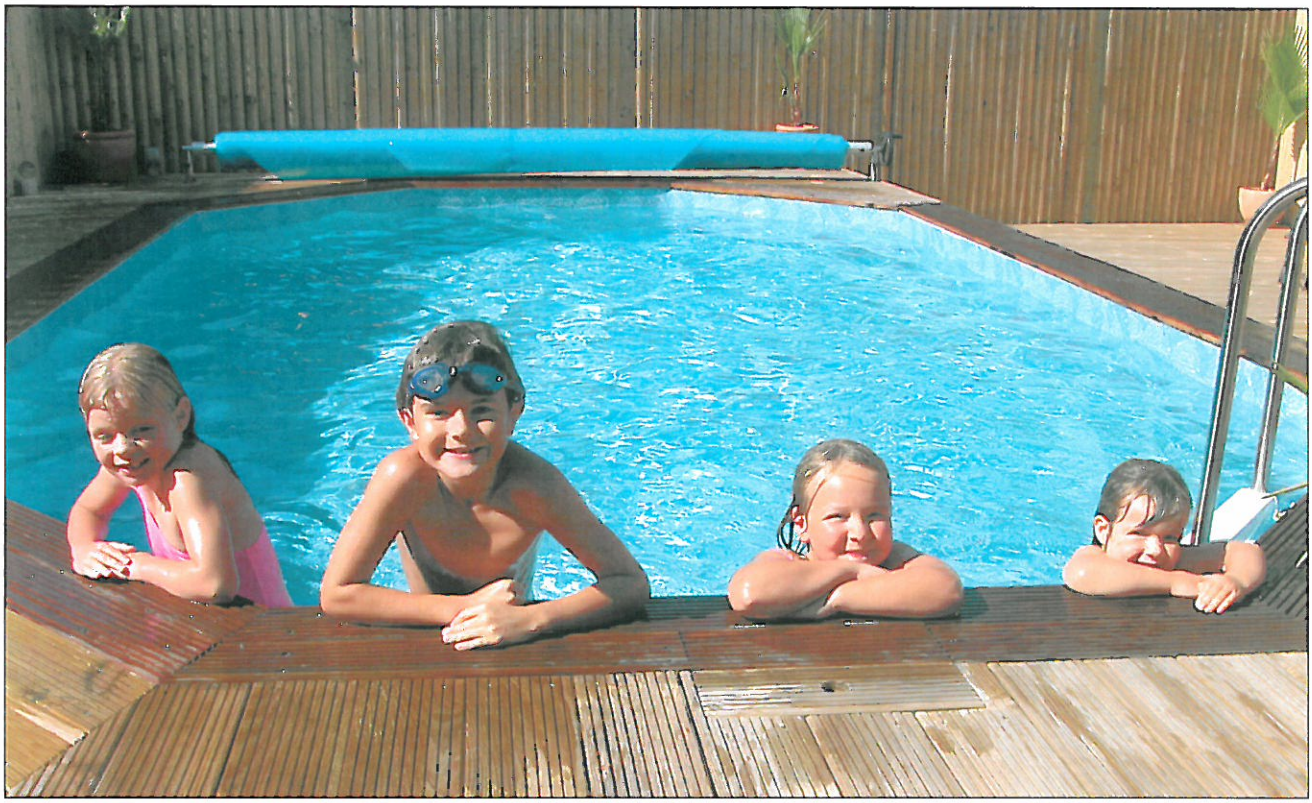
Plastica

WOODEN POOL

OPERATION AND MAINTENANCE MANUAL



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GETTING YOUR SWIMMING POOL UP AND RUNNING

A BASIC OUTLINE OF YOUR CIRCULATION SYSTEM

The pool water is drawn from the swimming pool via the surface skimmer by the circulating pump, passed through the filter and returned to the pool through the return inlet.

At the heart of the circulation system is the filter and below we describe the operation of the High Rate Sand Filter unit supplied with the "Premium" wooden pool.

FILTRATION SYSTEM

The purpose of your swimming pool filter is to remove suspended solids from the water. This function coupled with the correct chemical treatment of the water should give you a sparkling clear and safe pool environment in which to swim. It is however important that the pool owner understands fully, that even the most efficient filter will not achieve ideal pool water conditions if the chemical balance of the water is incorrect.

The pump draws water from the swimming pool and passes it via a special multiport valve, into the top of the filter tank, from where it passes downwards through a bed of special media, which traps the dirt and solids. The filtered water is then returned to the pool via the multiport valve. It is after this point that if a heating system is incorporated it will be connected into the return pipeline to the pool.

As the filter retains more and more trapped material, the flow of water reduces and the pressure within the system rises, until a point is reached that the filter needs thoroughly flushing out. This operation is known as "BACKWASHING" the filter and will be fully described later.

Let us now describe in more detail the functions which the filtration system can carry out as indicated on the label on the top of the multiport valve. These are as follows:

1) "FILTER": The normal setting for the valve. Pool water is drawn through the pump, passed into the top of the filter tank and down through the filter media, via the filter underdrain system, after which it is returned to the pool .

2) "BACKWASH": The setting used for flushing out the filter when it becomes overloaded with dirt. Water is drawn from the pool by the pump and enters the filter through the underdrain system in the bottom of the tank, where it loosens the media bed and forces the trapped dirt upwards and outwards through the distributor in the top of the tank and away to waste, so you lose water from the pool. The filter media is retained in the tank.

3) "RINSE": Used to flush out any dirt trapped in the pipelines after backwashing, only required for 10 seconds. The water follows the same path as when on " FILTER" except that the water exits to waste instead of returning to the pool.

4) "RECIRCULATE": Allows pump to circulate pool water without passing it through filter tank. Allows the heating and chemical dosing equipment to remain in use if filter tank is out of operation.

5) "WASTE ": Runs water from pool direct to the drain. Used when lowering pool water level or for vacuuming a heavily contaminated pool without overloading the filter media bed.

6) "CLOSED": Use this only when the pump is switched off. This position is used where filtration equipment is sited below pool water level. Allows pump lid to be removed and strainer basket to be cleaned, provided that all pump suction valves are also shut off.

IMPORTANT NOTE: THE FILTER PUMP MUST ALWAYS BE SWITCHED OFF PRIOR TO MOVING THE HANDLE OF THE MULTIPORT VALVE.

Heating a pool can be achieved by several different methods and it will be necessary to refer to the manufacturers instruction manual to ensure correct operation of their equipment.

Similarly, there are so many varied types of automatic dosing equipment that the pool owner should once again refer to the manufacturers instruction manual.

STARTING UP THE CIRCULATION SYSTEM

Before attempting to run the circulation system, make sure that the pool water level is approximately flush with the top of the surface skimmer opening.

When the filtration equipment is installed above the water line, it will be initially necessary to prime the pump as follows before proper circulation can be achieved.

1. Open all valves (if fitted), on suction side of pump, and allow water to flow down into the pump.

2. Set the multiport valve to "BACKWASH", switch on filter pump and backwash the filter (new filter sand must be cleaned of small impurities) as described below but for a minimum period of four minutes. As the pipework system is not fully charged with water, it may take several minutes for the pump to expel the air from the system and start to pump water at full flow. Once full flow is achieved then start to time your backwash. The water will now flush out the finings and impurities in the filter sand bed.

3. Either, after four minutes or once the water level reaches 25mm above bottom of skimmer opening, switch off pump, set multiport valve to "RINSE" ,switch on pump for approximately 10 seconds to flush debris from pipework, switch pump off and set handle to "FILTER".

4. Once you have carried out the full backwash procedure, top up water level to center line of skimmer opening if necessary, restart the pump and the pool should be fully operational. Check the pressure gauge reading on the multiport valve or top of the filter tank, depending on the model of filter you have and make a note of this as your "Clean running pressure" for future reference.

BACKWASHING YOUR FILTER

After a while the situation arises when the filter becomes overloaded with trapped material and needs to be "BACKWASHED", this point is indicated when the reading on the pressure gauge fitted to the multiport valve or filter tank rises by a maximum of 4 p.s.i. or 0.25 bar above the clean running pressure. However, regardless of pressure, the filter should be backwashed at least once every ten days. The backwash sequence of operations is as follows:

a) Ideally ensure that the pool water level is approximately 25mm above the centre-line of the surface skimmer opening, as you will be disposing of pool water to waste in the process of backwashing.

b) Switch off pump, set multiport valve handle to "BACKWASH", switch on pump and allow to run for 2 minutes. If you are fortunate enough to have a filter with a clear plastic lid in the top, then instead of timing your backwash you can observe the flow of water and go to the next stage when the water runs clear.

c) After 2 minutes or when the water runs clear, switch off pump, set multiport valve handle to "RINSE", switch on pump and run for 10 seconds minimum.

d) After 10 seconds, switch off pump, set multiport valve handle to "FILTER", and switch on pump.

The backwash should now be complete and the pressure gauge reading should have dropped back to the clean running pressure which you noted when first starting up your filtration equipment from new.
Always remember to top up the pool level after every backwash.

VACUUM CLEANING YOUR POOL

From time to time the floor of your pool will need to be vacuumed to remove any dirt, dust, debris or dead algae which has settled there.

The method of vacuuming is as follows:

First assemble the vacuum head to the handle and vacuum hose. (Some hoses have a special swivel cuff fitted to one end and it is this cuff which should be connected to the vacuum head).
Now with your hose coiled by your side at the poolside, gently lower the vacuum sweeper head by its handle to the pool floor and then slowly feed your hose into the pool pushing it under water as you feed it in, the importance of this being to ensure that no air is trapped in the hose. Finally connect the open end of the hose into skimmer, keeping it under water all the time if possible, by passing it through the surface skimmer mouth, (after having removed the basket) and inserting the cuff of the into the outlet hole in the bottom of the body.

IMPORTANT ! ALWAYS CLEAN OUT ANY STRAINER BASKETS AND BACKWASH THE FILTER BEFORE COMMENCING VACUUM CLEANING.

You are now ready to start vacuuming as follows:

In conditions where a pool is very heavily soiled, especially if there is a carpet of dead algae on the floor after shock dosing with chlorine, then vacuuming direct to waste is the best solution, thus avoiding overloading your filter bed, which may result in dirt passing through the filter media back into the pool.
However, if the pool floor is covered with leaves and debris, as is often the case when re-opening the pool in the spring, it is certainly best to remove as much of this excess rubbish as possible before vacuuming, using a either a leaf net or better still, by using one of the specially designed mains water garden hose powered leaf collection devices which are both cheap and efficient. Taking this preliminary step will help to avoid blockages in your vacuum hose, skimmer basket, pump basket or multiport valve.

To commence vacuuming, switch off the filter pump, plug in the vacuum hose as described earlier, make sure that the multiport valve is set to " FILTER", switch on pump and commence vacuuming.

During the vacuuming process the suction performance of the cleaner will deteriorate steadily until it ceases to pick up the dirt satisfactorily.
The suction performance can fall off for several reasons, the first being a blockage in the pump strainer basket which would be also indicated by a drop in the filter pressure gauge reading. To empty the basket, switch off pump, set multiport valve to "CLOSED", make sure the suction valve is closed or inlet sealed, remove lid, lift out and clean basket. Replace basket and pump lid, set multiport valve to "FILTER", open skimmer suction valve or inlet and switch on pump. Should suction performance fall off and the filter pressure gauge reading rise, then the filter bed has become overloaded and needs backwashing as described earlier under the section "BACKWASHING YOUR FILTER".
It is also possible that the vacuum sweeper head outlet hole or the hose itself can become obstructed, in which case the offending objects must be physically removed.
Continue these operations until the pool floor is clean, switch off pump, disconnect hose from the skimmer wier, remove hose, handle and vac head from pool. Make sure that vacuum suction valve is closed. Now top up pool water to correct level if necessary and make sure multiport valve handle is in "FILTER" position. You may need to carry out another backwash at this point. Switch on the pump and you are now back in the normal operating mode.

CONDITIONING & STABILISING THE WATER IN YOUR NEW POOL

BALANCING THE WATER

Before applying chlorine or any other sanitising agent to the pool water it is necessary to "balance" it, which means getting the alkalinity and calcium hardness levels in balance with the pH.

TOTAL ALKALINITY

Total alkalinity is measure of the resistance to violent fluctuations in the pH of the water and this level should ideally be maintained at between lOOmg/L and l2Omg/L, with a minimum level of not less than 8Omg/L and a maximum of not more than 2OOmg/L. The alkalinity level is raised by the use of "Relax" TA plus and lowered by the use of "Relax" pH minus. We strongly recommend that your get your local pool engineer to make the initial adjustment for you, especially should the level need lowering.

CALCIUM HARDNESS

Calcium hardness is a measure of the amount of calcium and magnesium salts found in the water.
The calcium hardness level should be maintained at not less than 2OOmg/L but is perfectly acceptable up to levels in the order of 3OOmg/L - 350mg/L. As there is no absolute maximum level you will be unlikely to have to adjust downwards but to increase the level then you will need to add "Relax" Hardness plus.

Once again, we recommend that you get your pool engineer to check and make the necessary adjustment for you.

pH

pH gives an indication of acid or alkaline the pool water is. The pH of the water must be maintained be between 7.2 and 7.8 the ideal being between 7.4 and 7.6. This is necessary to allow the chlorine to work effectively.
Incorrect pH levels can give any or all of the following results:

pH BELOW 7.2

pH below 7.2 causes -
- Eye irritation.
- Strong odours.
- Corrosion.
- Cloudy water.

Use "Relax" pH Plus to raise the pH.

pH ABOVE 7.6

pH above 7.6 causes -
- Eye irritation.
- Cloudy water.
- Permits rapid growth of algae.
- Reduced effectiveness of the chlorine.
- Scale and calcium deposits.

"Relax" pH Minus used to lower the pH in most residential pools.

Check the pH level daily and if required dose with the required chemical at the rate indicated on the container by the manufacturer.

SANITISING YOUR POOL

CHLORINE

Chlorine is the most commonly used disinfectant for swimming pool water and is normally supplied in granular, tablet or liquid form.

An initial application of chlorine stabiliser (cyanuric acid) to a newly filled pool acts as a shield to prevent the chlorine from being dissipated rapidly by sunlight and heat. This is particularly important if you are using granular shock or liquid chlorine to initially dose the pool .

The most commonly used form of chlorine is known as stabilised chlorine and comes in granular form. We recommend the use of "Relax" stabilised chlorine, it is highly soluble and should be sprinkled evenly over the surface of the pool.

Shock chlorine is generally speaking not used on an every day basis in most residential pools but is used as a occasional booster or shock treatment to kill off algae, should it start to get out of control. This material is also in granular form and should be pre-dissolved in warm water. It is not however as soluble as stabilised chlorine and tends to leave a powdery residue.

"Relax" chlorine tablets are very popular with some pool owners as they are very easy to use, simply needing to be put in the skimmer weir basket and allowed to dissolve by erosion. However they are very acidic and over use can in time cause excessive build up of cyanuric acid in the pool which can only be removed by partial drainage and refilling.

Liquid chlorine is best suited for automatic dosing, requiring the use of some form of electrically operated controller and a dosing pump. It is however often used for shock dosing a pool with a serious algae problem. Great care must be taken when using liquid chlorine as it is an extremely powerful oxidant and if splashed on skin or clothing can cause burning or severe bleaching. Should you splash yourself, wash the affected area immediately with copious amounts of water and if necessary seek medical attention

FREE CHLORINE

Free chlorine is the amount of chlorine available for future sanitation. A chlorine residual is obtained only after the chlorine demand of the pool is met. A minimum free chlorine level of 1.0mg/l to 1.5g/l must be maintained at all times in domestic pools and in very hot spells it is recommended to increase this level to between 2.0mg/l and 2.5mg/l.

SHOCK DOSING

This should be done once a week during very hot weather, and once every two to three weeks during cooler weather. Add the recommended dose of "Relax" shock chlorine to the pool, preferably when bathing has finished for the day. This should kill any bacteria or algae that might resist normal chlorine applications, and help clarifiy the pool water.

ALGAE CONTROL

Algae is microscopic plant life that grows in the water and forms on the walls and floor of the pool. An early sign of algae is a slippery or greasy film on the walls and floor. The regular (weekly) dosing with a good quality algicide will help avoid growth of algae. There are also now available several "Long life" algicides which when correctly applied will give three to four months protection.
NOTE: Algicides are not generally designed to kill algae once it has appeared, they are preventitives, which to be fully effective need to be used in conjunction with a suitable sanitizer.

WHEN TO DOSE WITH CHEMICALS

- Use only when test kit indicates. (Test daily).
- Add small quantities at a time, except when shock dosing with chlorine.
- Add chemicals as near the water surface and close to the return inlets as possible to obtain the best and most even distribution.
- Never add acid close to a skimmer or ladder, or any equipment containing metal.
- Never add acid (pH minus) and chlorine to the pool at the same time, as the combination of the two can produce a poisonous gas. A good safety precaution is to add chlorine at night and acid in the morning.

PROPER USE OF CHEMICALS

1. USE GOGGLES AND PROTECTIVE GLOVES WHEN HANDLING CHEMICALS.

2. KEEP ALL CHEMICALS OUT OF THE REACH OF CHILDREN AND IN SEALED CONTAINERS.

3. NEVER MIX POOL CHEMICALS TOGETHER IN THE SAME CONTAINER. THE COMBINATION OF CERTAIN CHEMICALS CAN PRODUCE A POISONOUS GAS OR CAN EVEN CAUSE AN EXPLOSION.

4. ALWAYS DOSE POOL IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AS INDICATED ON CHEMICAL CONTAINERS.

5. DO NOT STORE CHEMICALS IN AN UNVENTILATED ROOM OR PLANT ROOM.

6. ALWAYS READ THE INSTRUCTIONS ON THE CHEMICAL CONTAINER LABELS BEFORE USING THE CONTENTS AND FOLLOW THEM CAREFULLY.

7. WASH YOUR HANDS THOROUGHLY AFTER USING ANY CHEMICALS.

SWIMMING POOL WATER TESTING

CHLORINE AND pH TEST KITS

The most popular form of pool water test kit is the type which has two built in clear tubes and either two or three coloured columns alongside. By filling the clear tubes with pool water, putting in the appropriate test tablets, shaking until they have dissolved and then comparing the colours it is possible to determine the the levels of pH, chlorine or bromine and in some cases alkalinity of the water.
An increasingly popular means of testing the water is the Test Strip which has three felt pads which after being dipped in the pool, change colour and indicate the chlorine, pH & alkalinity levels of the water.

NOTE. When using a test kit, follow the directions. Keep all tubes clean, and rinse thoroughly after using. Use the same test tube for each specified test only. Take a water sample from approximately 350 mm below the surface of the water. DO NOT add chemicals to the water without first testing the water. Always make sure that any chemicals added have had at least eight hours to disperse in the water so that you will obtain a true reading.

PROBLEMS CAUSED BY CHEMICAL IMBALANCE AND THE SOLUTIONS

EXCESSIVE CHLORINE USAGE:	Pool water not stabilized and/or pH out of adjustment. SOLUTION: Add stabiliser /conditioner - Correct pH level
EYE & SKIN IRRITATION: STRONG CHLORINE ODOUR:	pH out of balance, or Combined chlorine level too high SOLUTION: Correct pH. Test for combined chlorine and if too high dilute pool water from mains as necessary.
CLOUDY WATER:	SOLUTION: Check pH and chlorine. Adjust pH and superchlorinate. Add " Relax" liquid clarifier. Run filtration continuously until water clears.
WATER TURNING GREEN:	pH too high and chlorine residual (free chlorine) too low. SOLUTION: Reduce pH, superchlorinate and when clear add algicide.

ROUTINE SUMMER POOL MAINTENANCE

DAILY ROUTINE

1. Check chlorine and pH with test kit. The best time to do this is probably in the evening, while the light is still good but not at its strongest. When holding the test set up to take your reading do not point it directly at the sun as this will give a distorted reading. To get the best result point the test set away from the sun but against an even light background.

2. Add chemicals as required to maintain correct chlorine & pH levels, remembering to allow a safe interval of time between doses to avoid dangerous reactions.

3. If necessary, clean the surface and floor of the pool of any debris that might have accumulated.

4. Check and empty the skimmer basket(s) as necessary.

5. Check the pump strainer basket. If it is necessary to clean this basket, close all pump suction valves and set the multiport valve to "Closed" position so that water does not overflow when removing the lid from the pump.

WEEKLY ROUTINE

1) Check filter pressure and if necessary backwash filter.

2) Vacuum clean pool if required. Backwash filter again.

3) Top up pool water level.

4) Check plantroom equipment for leaks etc.

5) If weather has been exceptionally hot and/or pool has been heavily used, shock dose the pool with shock chlorine to increase the chlorine level to 5mg/l. Do this in the evening after people have finished using the pool and make sure the filter is left running for at least 12 hours. NOTE: In cooler weather conditions and with a light bathing load then the period between shock treatments can be increased to once every two or three weeks.

NOTE: We strongly recommend that you backwash your filter at least once every fortnight, even if the pressure gauge reading does not indicate the necessity. This will help keep your filter sand bed in good condition and prolong its useful life.

WINTERISING YOUR POOL

a) To protect your pool, filtration and heating equipment, during the winter months, we recommend the following end of season routine:

b) Fill pool with water to top of skimmer opening and thoroughly vacuum it. Ensure water is in chemical balance as previously described on pages 4 & 5, then superchlorinate to 10mg/l, leaving the filtration running for at least 24 hours to ensure that chlorine is totally dissolved and evenly dispersed in the water. Add long life winter algicide in accordance with manufacturers instructions and once again leave filter running for 24 hours.

c) Backwash pool for at least 3 minutes or until water level reaches just below center line of skimmer opening and then rinse thoroughly. Switch off pump but leave backwash hose connected.

d) For above ground pool, partially drain by setting filter valve to "Waste." The water should then drain away by gravity until it reaches the bottom of the return inlet opening. Disconnect skimmer pipe at pump union and return inlet pipe at filter multiport valve union. Remove eyeball from return inlet and screw a 1½" threaded plug into body to seal it off. Remove, clean and store skimmer basket.
OR
For in ground pool, Connect vacuum sweeper hose into bottom connection of skimmer, making sure that hose is fully primed with water. Set filter valve to "Waste" and pump water to waste until pool level drops to bottom of the return inlet opening. .Switch off pump and disconnect vacuum hose. Now disconnect pipework as for above ground pool above.

e) Remove strainer basket & drain plugs from pump and open drain tap at bottom of filter tank. Remove pressure gauge from multiport valve, set valve handle to "Winter" position and store. Remove, roll up and store backwash hose.

f) Drain down heater or heat exchanger if fitted.

g) Remove both pool ladders and store.

h) Isolate electrical supply.

i) Finally, fit winter debris cover.

SUMMER RECOMMISSIONING

At the beginning of the next swimming season, remove the winter cover, check and re install all of the equipment in the reverse order to that in which you dismantled it, before starting the pool up as already described on pages 2 & 3. Adjust your chemical balance to the levels shown on pages 4 & 5, chlorinate and off you go again.

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