

HANDOVER BOOKLET & POOL and SPA OWNERS MANUAL



SPASA

A U S T R A L I A

SWIMMING POOL & SPA ASSOCIATION

Welcome

and congratulations on your new swimming pool and/or spa!

Owning your own pool and spa brings many benefits including being introduced to a healthy and active lifestyle, fun and years of entertainment for your family and friends whilst adding value to your home.

This booklet details some important information and certain requirements to assist you with the correct maintenance of your pool/spa, equipment and water balance. By following the advice provided, you will maximise your enjoyment, avoid unnecessary problems and safeguard your investment.

Happy Swimming!

HANDOVER

This Handover Booklet and Pool/Spa Owner's Manual signifies that your project has reached practical completion.

Your Handover Certificate can be found at Appendix B

CONTENTS

POOL & SPA SAFETY	2
Safety Barriers	2
General Safety	2
Spa Pool Safety Rules	2
Diving	2
Warning Signage	3
Cardiopulmonary Resuscitation (CPR) Signage	3
Storage of Chemicals	3
POOL & SPA WATER MAINTENANCE	4
Water Sanitation	4
Water Balance	4
Monitoring Water Quality	4
Maintaining Water Quality	4
Things to Consider with Water Maintenance	5
POOL & SPA COVERS	7
How Covers Work	7
FILTRATION BASICS	8
The Filtration System	8
Types of Filters	8
Discharging Water	8
Automatic Sanitation Systems	9
FUTURE WORK AROUND THE POOL	9
Post Installation Works	9
Draining your Swimming Pool	9
GENERAL TIPS	10
SPASA's Winter Maintenance Guide	10
SPASA's Summer Maintenance Guide	10
Appendix A - Logbook Inspection Sheets	
Appendix B - Handover Certificate	

SAFETY BARRIERS

The relevant Australian Standard for pool and spa barriers is: Australian Standard AS 1926.1 Swimming Pool Safety - Safety Barriers for Swimming Pools.

All States and Territories require that swimming pools and spas have barriers installed that comply with relevant local regulations and the specific applicable version of Australian Standard AS 1926.1 - Safety Barriers for Swimming Pools.

Regulations may vary slightly in different states and territories, but all pool safety barrier regulations are designed to keep young children (0-5) safe around swimming pools and spas in the absence of adult supervision. An overview of what is required can be found on the SPASA website or your local Council. (spasa.com.au)

As the owner, you have a responsibility to install and maintain the pool safety barrier in accordance with the relevant regulations and Australian standards. It is also compulsory to register your pool and spa in some states.

GENERAL SAFETY

SPASA supports water safety initiatives around swimming pools and spas that minimise the potential for avoidable accidents to occur.

The following guidelines assist in the safe use of a swimming pool or spa:

- ◆ **SUPERVISE** - always keep watch of your child when around water. Supervision is the key to prevent toddler drowning, adequate supervision means a responsible adult is always supervising children within arms reach.
- ◆ **RESTRICT** - restrict unsupervised access to water at all times. Understanding the importance of a compliant safety barrier and its maintenance ensures that access to the pool or spa is limited and provides a deterrent.
- ◆ **EDUCATION** - teach your child to be water confident. Ensure children are taught swimming, survival, and lifesaving skills at an early age, set rules for children near water and ensure those rules are enforced.
- ◆ **RESPOND** - learn CPR. In the event of an emergency, every parent and pool owner should have learnt first aid and CPR.
- ◆ **HEALTHY** - keep your pool/spa water healthy. A healthy pool or spa ensures that you and your family can swim and enjoy your pool spa all year round by keeping the chemistry right.

SPA POOL SAFETY RULES

1. A spa pool is a heated water environment and if you are concerned that it may adversely affect you it is your responsibility to seek medical advice.
2. NEVER PUT HEAD UNDER WATER.
3. Children under 10 years should be under the active supervision of a person 16 years or older whilst in the spa pool area.
4. Do not use the spa pool area while under the influence of drugs or alcohol (certain medications may produce adverse effects).
5. It is safer not to use the spa pool alone.
6. It is recommended that you use the spa pool for no longer than 15 minutes at a time.

DIVING

A 'NO DIVING' sign should be affixed in the immediate vicinity of your pool/spa. This is because most residential swimming pools and spas are not designed for diving.

Diving boards, water slides and trampolines used on, in or near the pool can lead to serious injury and should not be considered unless your pool has been specifically designed and built for this purpose.

WARNING SIGNAGE

In the relevant Australian Standards for residential spa pools AS 2610.1 Spa Pools - Public Spas and AS 2610.2 Spa Pools - Private Spas it is required that the following notices be supplied in the handover.

- ◆ Cardiopulmonary Resuscitation Sign
- ◆ Instructions on the emergency stop or power switch
- ◆ Spa pool safety rules – a cautionary sign
- ◆ Pool safety rules – a cautionary sign

CARDIOPULMONARY RESUSCITATION (CPR) SIGNAGE

Knowing CPR can save lives and can help to reduce serious water related incidents.

Whilst only some regions legislate the requirement for CPR signage to be placed near or in the immediate vicinity of the pool or spa environment, SPASA recommends that every pool and spa owner display one.

CPR signage for Cardiopulmonary Resuscitation follow guidelines prescribed by the Australian Resuscitation Council that lists the Basic Life Support flow chart.

The Basic steps of Cardiopulmonary Resuscitation are: **D-R-S-A-B-C-D**

- | | |
|-------------------|---|
| 1. DANGERS | Check for danger (hazards/risks/safety) |
| 2. RESPONSIVENESS | Check for response (if unresponsive) |
| 3. SEND | Send for help |
| 4. AIRWAY | Open the airway |
| 5. BREATHING | Check breathing (if not breathing / abnormal breathing) |
| 6. CPR | Start CPR (give 30 chest compressions followed by two breaths) |
| 7. DEFIBRILLATION | Attach an Automated External Defibrillator (AED) as soon as available and follow the prompts. |

STORAGE OF CHEMICALS

NEVER MIX CHEMICALS - this could lead to an extremely violent reaction (explosion!) and/or the production of toxic fumes. Even different chlorines can react violently when mixed together. Do not use the same bucket for diluting different chemicals.

Transporting

When transporting chemicals in your car, make sure they are secured so as to prevent them from mixing in the event of spillage or an accident. Eg: never carry chlorine and acid together in the boot of your car, keep them separate.

Storage

Store chemicals in a way to prevent them from accidental breakage or leakage. Chemicals that come into contact with each other can cause serious injury. Make sure all chemicals are clearly marked so that you do not confuse labels and container colours.

Safe handling of chemicals

You should always use gloves and protective eyewear when handling chemicals.

Always add chemicals to a bucket containing water – not the other way around. Adding water directly to a chemical is dangerous.

Have the filter running when you are adding chemicals to the pool water to ensure proper mixing and distribution.

Always read the instructions on the labels of pool or spa chemicals and other products, and follow them carefully.

POOL & SPA WATER MAINTENANCE

Healthy water is water that is safe for you and your family to swim in. Maintaining healthy water makes it less susceptible to harmful bacteria, viruses, algae, cloudiness, stains and protects your pool, spa and equipment against corrosion and scale build-up.

Pool and spa water can be contaminated with algae and bacteria from a variety of sources, including wind, rain water, top-up water, organic debris and number of swimmers.

One of the key measures for healthy water is pH levels, it is recommended that pH levels measure within a range of 7.2 - 7.6, otherwise it can damage your pool. This may put a strain on your pool circulation system that can lead to costly repairs. It can also lead to fading, discolouration and chalking of the interior surface of your pool or spa.

WATER SANITATION

Everything that enters your pool and spa, including swimmers, pets, leaves, debris and top-up water is a source of bacteria or algae. To control bacteria and prevent algal growth, you should treat your pool with a sanitising chemical and continuously filter the water as directed.

An adequate level of residual sanitiser will deter any unwanted contaminants without affecting the quality of the water. Regular testing and chlorine top-ups will help you maintain the desired residual level of 1.0 to 3.0 ppm (parts per million).

Alternative sanitisers are available for use as per the manufacturers directions.

WATER BALANCE

A correctly chemically balanced and sanitised pool and spa will provide a healthy and visually appealing swimming environment for you and your family to enjoy. A poorly maintained pool and spa exposes users to unnecessary health risks.

Having the right water balance is also crucial to the longevity of your swimming pool and spa equipment. A chemical imbalance can lead to corrosion and scale build-up on and in your swimming pool and spa, and possible damage to equipment.

Regular testing and balancing of pool and spa water takes very little time and ensures that you and your family are always swimming in ideal conditions.

MONITORING WATER QUALITY

When monitoring and maintaining pool and spa water quality, there are several aspects of operation that will need to be considered:

- ◆ the quality of the water supply
- ◆ rain water
- ◆ the type of pool or spa
- ◆ number of swimmers in the pool
- ◆ chemicals already in the water

MAINTAINING WATER QUALITY

Maintaining water quality to ensure water balance and appropriate, regulated disinfectant levels requires the use of appropriate chemicals. Safe processes for using chemicals and not exposing swimmers to unsafe chemical levels should be monitored.

Any water quality corrective action should be recorded and only be done according to the manufacturer's specifications, organisational policies and procedures and regulatory requirements.

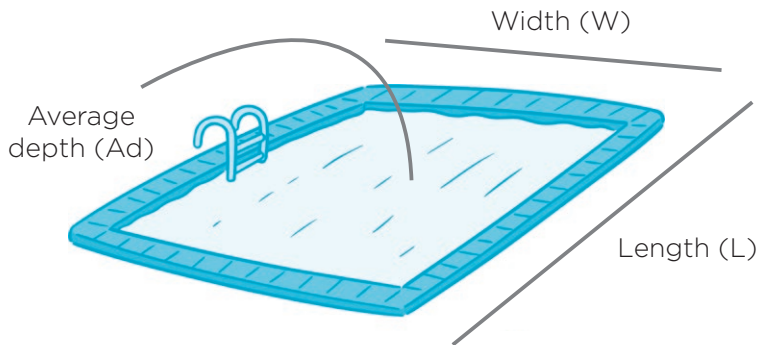
POOL & SPA WATER MAINTENANCE

THINGS TO CONSIDER WITH WATER MAINTENANCE

How big is my pool or spa?

To ensure your pool or spa is given the correct doses of chemicals, it is important to establish its size.

Finding the size (volume) is a simple matter of getting the area of the surface of the pool or spa and then multiplying that by the average depth.



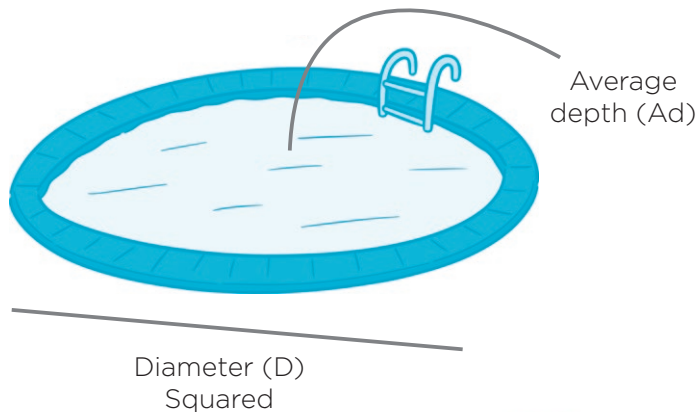
Rectangular example

$L \times W \times Ad \times 1000 = \text{Volume in Litres (Lt)}$

Length = 9m Width = 4m

Shallow end = 1.2m Deep end = 1.8m

$9 \times 4 \times [(1.2 + 1.8) \div 2] \times 1000 = 54,000 \text{ Lt}$



Round example

$D \times D \times Ad \times 785 = \text{Volume in Litres (Lt)}$

Diameter = 6m

Shallow end = 1.2m Deep end = 1.8m

$6 \times 6 \times [(1.2 + 1.8) \div 2] \times 785 = 42,390 \text{ Lt}$

pH Level

The pH level indicates how acidic or alkaline the water in your swimming pool is.

- ◆ The pH level ranges from 0 to 14
- ◆ 7 is neutral pH (a value below 7 is acidic and above 7, alkaline)
For most swimming pools, the recommended pH range is 7.2 to 7.6, and 7.0 to 7.2 for fibreglass pools
- ◆ Swimmers, rain, top-up water and chemicals all affect the pH level
- ◆ A pH imbalance can cause skin irritation and poor sanitation
- ◆ Sanitiser levels should be checked regularly and adjusted accordingly

Total Alkalinity

Total alkalinity refers to the level of bicarbonates, carbonates and hydroxides in your pool water.

- ◆ The recommended range is between 60 and 200 ppm, depending on the type of swimming pool
- ◆ Low total alkalinity can cause erosion of concrete, tiled and painted pool surfaces, and destabilise pH levels
- ◆ The total alkalinity of your top-up water will affect the total alkalinity of your pool

Total alkalinity should be checked regularly and adjusted accordingly.

POOL & SPA WATER MAINTENANCE

Calcium Hardness

Calcium hardness is the level of dissolved calcium present in your pool water.

- ◆ The recommended calcium hardness range is 80 to 500 ppm
- ◆ Low calcium hardness can lead to corrosion
- ◆ High calcium hardness can result in scale build-up

Test your pool water for calcium hardness regularly.

Sanitiser

Chlorine is the most commonly used water sanitiser in the world, and there are many forms of this highly effective product, including:

- ◆ Granular Chlorine (calcium hypochlorite)
- ◆ Liquid Chlorine (sodium hypochlorite)
- ◆ Stabilised Chlorine (in two forms):
“Dichlor” granular chlorine, and
“Trichlor” slow dissolving tablets
- ◆ Salt Water Chlorinators (electronic units which produce chlorine by the electrolysis of salt in the pool water)

Whatever form of chlorination you use, for it to work efficiently, the pH must be maintained within the recommended range.

Free Available Chlorine can be tested with a test kit or by having the water tested at a Pool Shop or by a Pool and Spa Service Technician.

Note: After start-up, refer to the manufacturer's documents provided with the pool sanitisation system for information on operation and maintenance of your swimming pool/spa.

Mineral blends

There are many mineral blends that provide an alternative sanitation system based on electrolysis technology. Minerals are added to the pool water and the chlorinator generates the chlorine in the pool water. This system typically uses Magnesium and Potassium-based products as an alternative to Sodium only systems.

Note: After start-up, refer to the documents provided with your particular system for information on operation and maintenance of your Mineral Pool.

Stabiliser (sunscreen)

Ultra-violet light destroys chlorine, and for health and financial reasons it is important to overcome this effect as much as possible.

Stabilising the water with sunscreen (Cyanuric Acid) is strongly recommended as the Cyanuric Acid when added to the water will reduce the amount of chlorine destroyed by sunlight.

Stabiliser is also lost through splashing and by backwashing the filter. Sunscreen may need to be replaced regularly, especially during the summer season.

Any Chemical Additions

As a general rule, you are far better off adding small amounts of chemicals at a time whilst running the filter, and then testing the effects after several hours.

Attempting large chemical changes by adding large amounts of chemicals at a time can result in an imbalance in the water, which is more difficult to fix and maintain.

Testing Water Quality

What testing method should you use? Keeping your pool and spa clean has never been easier. There are two basic types of testing method used by most consumers: liquid kits and test strips.

- ◆ Liquid kits: Liquid Test Kits require that you put a sample of water into a specific testing plastic container and then carefully add drops of chemical reagents, watching for a change in the colour of the sample. Colour changes caused by the reagents within the water can then be compared to the colour indicators on the plastic container and add chemicals as needed.

POOL & SPA WATER MAINTENANCE

- ◆ Test strips: Test Strip Kits are the easiest method for pool and spa water testing. They are fast and simple to use because they eliminate the need to measure samples and count drops. Typically, you would simply dip a strip in the water for 5-10 seconds and then remove it. You then compare the colours on the strip to the colour chart on the label and add chemicals as needed.

Pool Shop & Service Technicians: Whilst home pool test kits test the most essential indicators, they don't test everything and are not as accurate as having professional do it for you. Normally, pool shops and service technicians offer a free water testing service. They can test for things that you don't normally or can't test at home such as copper, total dissolved solids and water hardness. Getting pool/spa water testing by a professional means that they can create a pool/spa profile, track and record history as well as any requirements. They will also advise you of what chemicals are needed to get your pool/spa in tip top shape.

Frequency of testing

Testing frequency will vary for individual pool environments and bather loads, but testing should be undertaken at least once per week. Testing frequency should increase depending on how often the pool/spa is being used along with the weather conditions.

All pool/spa water tests should be recorded in a logbook:

- ◆ indicating date & time
- ◆ parameters tested
- ◆ results of tests
- ◆ action taken
- ◆ and relevant notes

Getting a pool/spa water tested at a pool shop or by a service technician means that they can track and record results of your pools history and requirements. However, you may still need to keep your own logbook if professional pool testing is undertaken less frequently than every week.

See Appendix A - Logbook Inspection Sheet

POOL & SPA COVERS

Pool and spa covers are a valuable addition to your swimming pool and spa.

There are several things they help with. These include keeping dirt and debris out of the pool, helping to prevent evaporation and retaining heat to extend the swimming season.

While a pool and spa cover is great at stopping evaporation, heat loss and chemical loss, it also needs to be removed regularly to let the pool 'breathe' and to check the water chemistry. Check with your SPASA pool contractor and/or pool cover supplier to ensure you understand how often you should remove your cover based on the pool's interior and other relevant factors.

HOW COVERS WORK

Swimming pools and spas can lose energy in a variety of ways, but heat loss and evaporation through the pool surface is by far the largest source of water and energy loss.

The heat loss and evaporation rate from an outdoor pool or spa varies, depending on the water temperature, air temperature and humidity, and the wind speed at the pool surface.

- ◆ The higher the pool/spa temperature and wind speed and the lower the humidity, the higher the heat and water losses will be on your pool, therefore the greater the savings if a pool cover is installed.
- ◆ Just like insulating your home, insulating your pool with a cover is the single most effective means of reducing your heating costs.
- ◆ Pool and spa covers minimize evaporation for both outdoor and indoor pools.

FILTRATION BASICS

THE FILTRATION PROCESS

Filtration is the physical removal of neutralised contaminants (chemicals, debris and other waste), together with the insoluble particles from the water.

Daily filtration cycles will vary but should be in the order of 6 to 8 hours (depending on the size and type of the system installed), to ensure that at least (1) one “turnover” is achieved (that is, as a minimum, the equivalent litreage of the pool/spa is filtered each 8 hours). Filtration cycle times may be split over 2 to 3 times a day. Also, you may need to increase the filtration cycle times during periods where there is a higher bather load than normal.

THE FILTRATION SYSTEM

While filtration systems may differ regarding their type, they will all have the following basic features:

- ◆ a skimmer box which allows water to enter and capture surface debris via the skimmers weir. A weir is the front flap located on the front of your skimmer
- ◆ an initial leaf basket in the skimmer to trap leaves and large debris, before the water is sucked through to the pump and filter
- ◆ a secondary basket situated within the pump, commonly referred to as a hair and lint pot
- ◆ a circulating pump
- ◆ a filter which physically removes solids from the water
- ◆ Pipework through which the water is circulated throughout the pool/spa

TYPES OF FILTERS

All filtration relies on removing solid matter from the water as it is pumped through the filtration system.

There are two popular types of filtration systems currently in use:

- ◆ Media Filter (sand, zeolite or glass)
- ◆ Cartridge Filter

These types have high flow characteristics and are highly efficient. However, they both require cleaning to remove the entrapped solids and failure to clean filters (as required) will result in reduced filtration flow, because of the accumulated debris blocking the filter medium.

Regular cleaning (as indicated by the filters pressure gauge) is essential. Failure to clean filters can also cause an increase in pressure within the filter tank, which will reduce the life expectancy of the unit. A complete filter clean using a propriety brand filter cleaner should be undertaken yearly.

Cleaning methods will depend upon the filter type. Sand Filters can be “backwashed” (which is to reverse the flow of water through the filter tank valve and flush debris to waste). Cartridge Filters require removal of the cartridge for it to be hosed down and soaked in cartridge cleaning fluid.

Alternative filters and media are available and it is recommended to follow the manufacturers cleaning directions.

Regular cleaning of a filter will provide benefits in terms of better water flows for filtration & vacuuming, better chlorination and better circulation within the pool, due to the increased flow rate.

In addition to this regular cleaning, periodic service of the filter is recommended to remove any build-up of grease and scale. This can be arranged through your SPASA Service Technician.

DISCHARGING WATER

Discharging wastewater during a backwash cycle or hosing down a cartridge filter is an important part of filter maintenance; however, it is important to note that wastewater being discharged must not be disposed of via any storm water system or allowed to simply run off onto adjoining land. You may need to make enquiries with your local council or water provider to see what is permissible in your state or territory.

FILTRATION BASICS

AUTOMATIC SANITATION SYSTEMS

All pools require some type of controller to ensure correct sanitation of the pool/spa water.

Automatic Pool sanitation systems are how swimming pool water is disinfected or kept in a healthy and usable condition for swimming. The choices available are ever growing but the most popular include:

- ◆ Chlorine / Bromine
- ◆ Salt Chlorinators
- ◆ Hydrogen Peroxide
- ◆ Mineral Salt Pools
- ◆ Ionised Pools
- ◆ Ozone Generation
- ◆ Natural Pools

Whichever one you choose will do the job as long as the system has been correctly sized for your pool/spa environment and that it is properly maintained in accordance with manufacturer's instructions.

FUTURE WORK AROUND THE POOL

POST INSTALLATION WORKS

Any future additional building or other works undertaken near the installed swimming pool may have unintended consequences, such as:

- ◆ ground movement and land stability;
- ◆ undue impact or influence to the structural integrity of the installed swimming pool;
- ◆ damage to the swimming pools recirculation system
- ◆ damage to connected swimming pool equipment

It is worth considering the impact of the following on your newly installed swimming pool and spa:

- ◆ any electrical and equipotential bonding requirements
- ◆ drainage and the impact retained water may have in the pool and spa area
- ◆ landscaping, retaining walls and other earth works

To prevent any damage post installation, additional building or other work should only be undertaken after seeking professional advice. Contact should be made with your SPASA pool builder and spa technician if you are unsure.

DRAINING YOUR SWIMMING POOL

You should NEVER drain your swimming pool. This is because draining the water from your swimming pool:

- ◆ can cause irreversible structural damage to your swimming pool, its interior, surrounds and associated equipment if not done correctly
- ◆ may affect your swimming pools warranty
- ◆ should only be done in very specific circumstances, such as remediation or renovation work.

GENERAL TIPS

Contact your pool builder, pool shop or service technician who will be able to determine whether draining the pool is required and ensure it is done safely if it is determined safe.

SPASA'S WINTER MAINTENANCE GUIDE

1. Thoroughly backwash the filter and clean it with a recognised filter cleaner and degreaser
2. Ensure that the skimmer basket and hair and lint-pot are free from debris
3. Lubricate all O-rings with a silicone-based lubricant
4. Adjust the total alkalinity level with a buffer (sodium bicarbonate) if the level is below 80 and 120 ppm
5. Adjust the pH between 7.2 to 7.6 by adding acid if the level is too high or soda ash if it's too low
6. Mix all chemicals in a full bucket of water before adding to the pool
7. Mix correct amount of sanitiser in a bucket of water and add to the pool
8. Mix correct amount of a long-life algaecide that is specifically designed for winter. Add this to the pool
9. Adjust the timer to allow the filter to operate for two to four hours each day, ideally outside of peak periods
10. Automatic Chlorinators (or similar) need the cells cleaned and controller can be adjusted to the half-production setting

SPASA'S SUMMER MAINTENANCE GUIDE

1. Check and clean the skimmer basket and hair and lint-pot basket weekly. Do this more often if the pool is used frequently or when leaves and debris blow into the pool
2. Backwash any sand or DE filters and clean cartridge filters. The frequency of filter maintenance also depends on how often the pool is used
3. Check sanitiser levels, ideally daily and add sanitiser to maintain minimum levels
4. Check the operation of salt chlorinators or automatic systems. The more people that use the pool, the more sanitiser is required to kill algae and bacteria
5. Check the pH every two or three days. It is a good idea to mix all chemicals with a full bucket of water before adding to the pool
6. Check the Total Alkalinity (TA) weekly. Adjust the total alkalinity level with a buffer (sodium bicarbonate)
7. Check and adjust the timer to allow the filtration system to operate for six hours each day. Most people run their filtration system for three periods of two hours daily
8. Take a sample of pool water to the local pool shop every two to four weeks during swimming season to make sure the water balance is correct
9. Salt-chlorinated pools may need additional salt. The production control on the salt chlorinator may have to be adjusted to increase or decrease its output
10. Maintain the water level at least halfway up the skimmer box opening
11. Inspect plumbing for leaks
12. Vacuum the walls and floor regularly

APPENDIX B - HANDOVER CERTIFICATE

- This Handover Certificate is provided as acknowledgment that the pool/spa has been completed as per the scope of works under the contract
- A demonstration on how to operate the equipment and chemically treat the water has been carried out
- The importance of conducting maintenance in accordance with this manual and manufacturers warranties has been explained
- The initial chemical treatment has been carried out

Note: Where a permanent swimming pool barrier is not included as part of the contract, the Customer has an ongoing responsibility and obligation to keep the pool safe and secure by maintaining the erected temporary pool barrier if one is installed, or erecting one until such time as a permanent barrier is installed and final approval is provided by the relevant approval authority.

Swimming pool/spa specifications

Refer to your contract for information, specifications and equipment relevant to your pool and/or spa.

Manufacturer Manuals

All manuals relevant to the project have been provided as part of the handover process. A review of the manuals will ensure that you better understand your pool/spa's capacity, operation and maintenance requirements. These should be kept in a safe place.

-
-
-
-
-
-
-
-
-
-
-
-

Details of Parties

Owner/s:

Ph: Email:

Site Address:

Signature: Date:

Contractor:

Ph: Email:

Signature: Date:

SPASA Recommended Pool Shops & Service Technicians

Below is a list of SPASA pool and spa professionals recommended to look after your pool and/or spa:

Business Name:

Address:

Phone:

Other:

Business Name:

Address:

Phone:

Other:

Business Name:

Address:

Phone:

Other:

Business Name:

Address:

Phone:

Other:

If left blank, refer to the Find a Member section at: www.spasa.com.au



© Swimming Pool & Spa Association of Australia Ltd

ABN: 74 150 541 816

8/13 King William Road, Unley SA 5061

1300 021 482

members@spasa.com.au

www.spasa.com.au

Version: 2022.02.10