



Hot Tub Maintenance Guide

The complete guide for owners of hot tubs made available to the public as part of a holiday property let.



Introduction

A hot tub will provide your customers with their own personal haven of relaxation and therapy; it will be a refuge away from the stresses and strains of everyday life and a place where they can spend quality time with loved ones and friends.

To keep the hot tub water healthy, clean and inviting it is very important that it is treated correctly and regularly with chemicals that will keep the water balanced, kill and prevent bacteria growth and remove non-filterable wastes.

This guide is produced to help you understand hot tub maintenance and in particular water treatment using chlorine or bromine based sanitisers (disinfectants) and explains the importance of establishing and maintaining the correct chemical levels.

At the back of the guide there is a section on chemical safety please read this thoroughly before you begin using or treating your hot tub and always read and follow the instructions that are printed on the chemical containers before application.

Thank you for choosing AquaSParkle for your water treatment.

Who is this guide for?

This guide provides detailed advice to help the following persons maintain a hot tub when used in a “business setting” as per current health and safety guidelines:

- **Private owners of a hot tub who make it available to use as part of a holiday property let.**
- **Holiday Park site owners who make a hot tub available as part of a holiday property let.**

Important: Domestic type hot tubs are not suitable for medium or large-scale business use (ie large numbers of casual bathers and/or unrelated groups), or for commercial activity, as design features and systems for control are unlikely to be sufficient to cope with user demand. The information in this guide does not apply to commercial hot tubs found commonly in hotels, leisure facilities and health clubs.

HSE Guidelines

Definition: Hot Tubs in a business setting

A holiday let where a hot tub is available for a family, solely for their own use.

Domestic-type hot tubs used as part of a business activity (eg in a holiday park rental unit or hotel bedroom(s) with their own dedicated hot tub, or as part of a rental agreement for a single family or group use) are subject to the general duties under the HSW Act.

There is a legal requirement for these systems to be managed and controlled in proportion to the risk and the risk assessment should consider the type of hot tub and its use.

Identifying and assessing the risk

Before any formal health and safety management system is implemented, the duty holder is responsible for ensuring a risk assessment is carried out to identify the possible risks.

The purpose of the risk assessment is to enable a decision on:

- The risk to health.
- The necessary measures to prevent or adequately control the risk from exposure to legionella or other infectious agents in the spa or any work associated with it.

For further information and for the most up-to-date guidelines, please see below.

Note: The HSW act does not apply to the private owners of hot tubs installed in a holiday park unit where there is no financial gain and they are for the exclusive use of the owner, family and occasional guests. To ensure its safe use the hot tub should be used and maintained in accordance with the manufacturer's instructions.

Essential reading

HSG282 – Control of legionella and other infectious agents in spa pool systems

URL - <http://www.hse.gov.uk/pubns/priced/hsg282.pdf>

Risk Assessments – a brief guide HSE

URL - <http://www.hse.gov.uk/pubns/indg163.pdf>

L8 – The control of legionella bacteria in water systems

URL - <http://www.hse.gov.uk/pubns/priced/l8.pdf>

Risk Assessment

IMPORTANT - All businesses that run Hot Tubs will need to create they're own risk assessment.

Please see an example Risk Assessment below.

Risk Assessment									
Customer: Super Tubs		Activity: Hot Tub Care & Commissioning							
Location: London		Job No.: N/A							
Electrical Isolation? : <input type="checkbox"/>		OTHER PERMIT REQUIRED? : <input type="checkbox"/>							
Confined Space Entry? : <input type="checkbox"/>		Mechanical Isolation? : <input type="checkbox"/>							
		Working at height? : <input type="checkbox"/>							
Activity	Hazard	Risk 1-5	Likelihood 1-5	Persons at Risk	Risk 1-25	Risk Rating	Safety Procedures/Control Measures		
Commissioning	Micro build up in unused pipework and tub well.	5	4		20	HIGH	50 ppm Chlorine for 1 hour. Allow the chlorine level to reach tolerance before bather entry. If tub left for 1 week with no disinfectant dosing please treat next re-fill as commissioning. Dissolve granules in warm water (30 -40 °C) and add to skimmer. Leave for 20 minutes before turning on any electrics. See guide for recommended dosing limits.		
Hot Tub Maintenance	No disinfectant	4	3	Users Customers Staff	12	CRITICAL	Check disinfectant levels twice per day and record. Install in line dosing control measures if applicable. Ensure corrective action is logged and signed for.		
	Low pH	2	4	Users	8	MODERATE	Correct pH ensures effective disinfection, reduces the risk of corrosion and helps deliver bather comfort. Add pH plus dissolved in warm water (30 -40 °C) one teaspoon at a time. Check after 10 minutes circulation.		
	High pH	2	4	Users	8	MODERATE	Correct pH ensures effective disinfection, reduces the risk of corrosion and helps deliver bather comfort. Add pH minus dissolved in warm water (30 -40 °C) one teaspoon at a time. Check after 10 minutes circulation.		
	Clean Filter	2	4	Users Staff	8	MODERATE	Deliver correct circulation to the tub and improves water clarity.		
	Pipework Flush	3	3	Users	9	MODERATE	De-scale on pipework can create a rough surface ideal for bacteria. Pipework needs to be cleaned routinely and logged (hard water - monthly, soft water quarterly)		
	Shock	3	3		9	HIGH	Shock weekly		
Testing	Bacteriological Testing	3	3	Users Customers Staff	9	HIGH	Monthly tests for microbiological contamination. Where the tub is being changed regularly please ensure swabs taken post change and send next day delivery for testing.		
	Legionella Testing	5	3	Users Customers Staff	15	HIGH	Test quarterly and record results.		
Hot Tub Usage	Incorrect Use	1	2	Users	2	N/A	Ensure correct signage displayed and usage information provided		
	Wet Floor	2	4	Users	8	MODERATE	Slips and trips		
	Glass and crockery being used	2	4	Users	8	MODERATE	Ensure only plastic item are used in and around the hot tub		
Chemical Dosing	Disinfectant	3	5	Staff, Customer	15	HIGH	Ensure correct use of PPE (goggles and gloves)		
Assessment by									
Checked By									
	Signature								
	Signature								

Print 2 Copies - 1 - Site Log Book / 2 - Working Copy

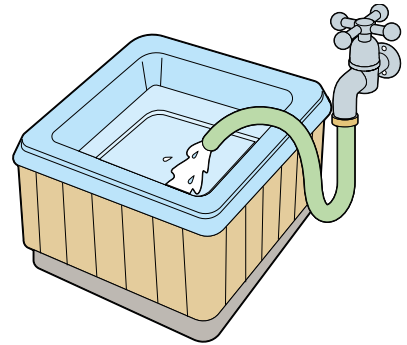
Commissioning the Hot Tub

The hot tub should be fully tested to confirm it's functional, safe and fit for its intended purpose. After leaving the factory, the hot tub may harbour residual water and microbiological contamination from pressure testing.

1

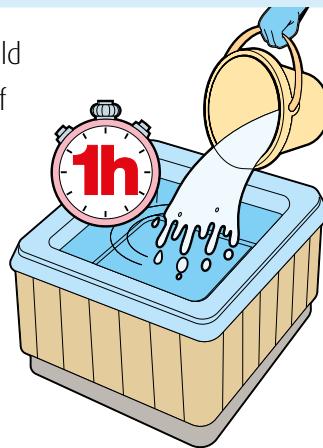
It is important that the hot tub is dosed with a high level of sanitiser immediately after it is first filled with fresh water. Always use fresh mains water. If using a hose, allow water to flush out for several minutes.

To prevent back-siphoning of the water don't let the fill hose fall under the waterline. Ideally, a non-return valve device should be fitted to the hosepipe or bib-tap.



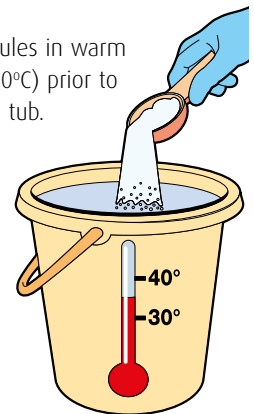
2

The level of sanitiser dosed should be sufficient to achieve a level of **50mg/l** of free chlorine for a period of one hour. Once the product has been applied, leave the pumps running for at least one hour (filter cycle) to allow the chemicals to circulate. See table below.



HANDY TIP:

Dissolve granules in warm water (30 - 40°C) prior to adding to the tub.



3

Open the air control valves and operate all diverter valves to ensure that the water flows through all the hot tub jets and pipework. If there is an air blower fitted this should not be run for the first 15 minutes to minimise the formation of an aerosol.

AquaSPARKle Rapid Shock (stabiliser free chlorine granules) is recommended for this purpose. Once the product has been applied, leave the spa for 10 minutes then switch the electricity supply on and run all pumps for a period of 15-20 minutes, opening all air control valves. If your hot tub is fitted with them, operate all diverter valves to ensure that the water flows through all the hot tub jets and pipework. Finally, if your hot tub has an air blower fitted switch it on and let it run for a few minutes. After a minimum of one hour, reduce the sanitiser level to the normal operating levels. Please note that the above also applies if you drain the hot tub and leave it empty for a period of time before refilling and re-commissioning it. Once commissioned, the hot tub should be treated as if in normal use.



Spa volumes		Rapid Shock to introduce a level of 50mg/l
Litres	Gallons	
500	110	37g
1,000	220	72g
1,500	330	110g

Circulation & filtration

The equipment supplied with hot tubs varies from make-to-make but all hot tubs have at least one pump and a filtration system. It is the pump that creates the flow (circulation) of water within the pipework and built into the circulation will be the filter. As the water circulates through the filter, particles are removed and collected within the filter cartridge.

The combination of removal of particles by the filter and good chemical water treatment is essential to keep your spa water clear, clean and healthy.

It is likely that the circulation of your hot tub will be taken care of automatically by the filtration management system.

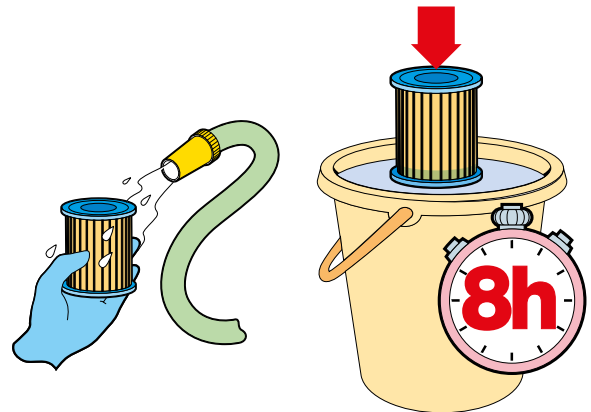
Cartridge Filters – All hot tubs are supplied with a cartridge filter which removes particles from the hot tub water. The filter will also collect oils and greases and over time this will begin to impair the filter efficiency and reduce the speed at which the water flows around the circulation system. It is therefore necessary to chemically clean cartridge filters, typically after each changeover of customers. At least two sets of cartridge filters should be retained to ensure there is one set in use while the other is being chemically cleaned and dried.

How to clean a cartridge filter

Standard Filter Cleaner

Remove filter(s) from filter compartment. Rinse filters with fresh water using a high-pressure hose pipe to remove loose matter.

Fill a plastic bucket with clean water, then carefully add both the twin Immerse sachet contents/Cartridge Cleaner and stir. Place dirty cartridge into the solution after first hosing off any loose materials and debris. Ensure the cartridge is completely immersed and soak for a minimum of 8 hours. Thoroughly clean and rinse with fresh water. For best results allow cartridge to dry before re-installing.

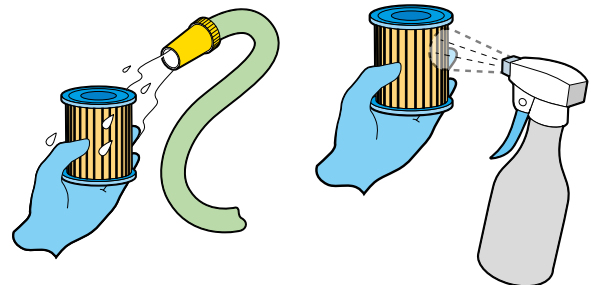


Instant Filter Cleaner

Remove filter(s) from filter compartment. Rinse filters with fresh water using a high-pressure hose pipe to remove loose matter.

Thoroughly spray filter with Instant Filter Cleaner taking care to penetrate filter leaves and veins with product. Leave filters to stand for 15 minutes. Rinse filter thoroughly with fresh water from hose pipe - foaming may occur so ensure filter is completely cleaned of all Instant Filter Cleaner residue.

Heavily soiled filters may require a second application of Instant Filter Cleaner. Once filters have been thoroughly cleaned and flushed they can be returned to the filter compartment of your hot tub.



HANDY TIP:

Consider having two sets of filters numbered for each specific hot tub to avoid any cross contamination.

Please refer to page 12 for AquaSPARKle filter cleaners.

Testing the water

Water should be routinely tested to ensure the continued effectiveness and suitability of the treatment programme. The frequency and extent of the analysis will typically include daily, monthly and/or quarterly tests to ensure the chemical dosing regime and water quality are appropriate.

Identifying changes in water chemistry such as pH, sanitiser levels and water balance should allow for necessary corrective actions to be taken according to the results. The test results and any corrective action should be provided in the form of a report (Water Testing Record Sheet, see the next page of this guide) and will then form part of your record-keeping requirements.

Frequency	Action
At least twice a daily	Test pH & sanitiser level of water with suitable test kit. Record results. Check water clarity. Add chemicals as required. Record action/s taken.
Monthly	Send water sample to UKAS approved laboratory for a microbiological test.
Quarterly	Send water sample to UKAS approved laboratory for a legionella test.

Recommended levels: to keep the water safe and bacteria free:

Free Chlorine: 3 – 5mg/l Bromine: 4 – 6mg/l pH: 7.0 – 7.6

Pooltester

Test Strips and domestic pooltesters are NOT recommended as appropriate devices for accurate and consistent testing of water when the hot tub is used in a business setting.

Professional Comparator & Photometer Test Kits

We would recommend professional testing kits that use reagent tablets to determine the chlorine or bromine, pH and total alkalinity levels and other parameters depending on the device.



Microbiological water testing – HSE recommendation

A microbiological monitoring regime should include the routine sampling and testing for the presence of bacteria and should include an ACC (or total viable or total colony count), coliforms, E coli and P. Aeruginosa, in addition to quarterly tests for legionella. This should be carried out by a UKAS approved laboratory.

HSE recommendation:

Monthly Send water sample to UKAS approved laboratory for a microbiological test.

Quarterly Send water sample to UKAS approved laboratory for a legionella test.

Additional microbiological sampling should also be taken:

- When a hot tub is first used or commissioned
- After a report of ill health following hot tub use
- Where there has been a contamination incident
- Where there is doubt about the effectiveness of the control regime
- Where alterations are made to the treatment or maintenance regimes.

Recommended Testing Equipment

Photometers

Photometers provide precise water analysis in a compact hand held device. The units shown below are all waterproof with a LCD back-lit display and memory function. The accurate results are shown on the display so no colour matching is required by the operator. Supplied in a hard-wearing portable carry case with reagents and accessories.



Photometer Kit Options:

Parameter	Reagents (Test Tablets)	Palintest - Pooltest 4	Palintest - Pooltest 6	Lovibond - 278110-HSG	Lovibond - MD110
Free Chlorine	DPD No 1	●	●	●	●
Total Chlorine	DPD No 3	●	●	●	●
Bromine	DPD No 1	●	●	●	●
pH	Phenol Red	●	●	●	●
Total Alkalinity	Alkaphot	●	●		
	Alka M				●
Calcium Hardness	Calcicol No1 & No2		●		
	Calcio-H No1 & No2				●
Cyanuric Acid	Cyanuric Acid		●		●
TDS Meter	SD80			●	

Photometer Testing Tips:

- Wash and dry hands before commencing testing
- Make sure the test tablets are the correct grade for the equipment being used
- Ensure all equipment is clean and dry
- Check the tablet prior to testing and reject any suspect tablets
- Rinse vials 3-4 times with sample water before carrying out the test
- Never handle the tablet
- Ensure the test tablets are completely dissolved with no particles floating in the test cell
- There must be no bubbles adhering to the inside walls of the test cell
- The cell compartment itself must be kept clean and dry

TDS Meter

The Lovibond SD80 Meter provides a compact easy-to-use solution. This hand-held meter can store up to 25 results in its memory with date, time and temperature information for each result.



Water Testing Record Sheet

Week Commencing:

Location:

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Model/Type:

Water Volume:

Disinfectant Type:



Date	Time	Tested By	Water Clarity 5 - Crystal Clear 1 - Very Cloudy	Disinfectant Chlorine 3-5mg/l Bromine 4-6mg/l	pH 7.0 - 7.6	Action Taken Chemical Type Added Amount Added
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
SATURDAY						
SUNDAY						



Balance the water

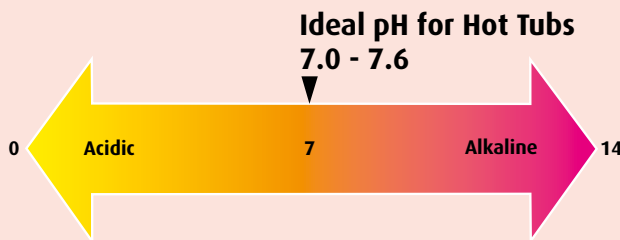
Establishing and maintaining the correct water balance is important for a number of reasons:

- **Reduced chemical efficiency**
- **Bather comfort**
- **Protection of hot tub and hot tub equipment**
- **Water quality and appearance**
- **Makes it easier and less time consuming to look after the hot tub**

The pH, total alkalinity, calcium hardness, temperature and total dissolved solids (TDS) of water are the main factors in determining the balance of the water. Balanced water is neither scale forming nor corrosive.

pH

pH is a measure of how acidic or how alkaline the hot tub water is.



Problems Associated with incorrect pH Levels	
pH below 7.0	pH above 7.6
Corrosive water Etching of surfaces Staining Skin & eye irritation Damage to spa equipment	Scale formation Filter calcification Cloudy water Drying to skin Reduced effectiveness of chlorine

The most important factor in water balance is the pH level. As you can see from the above diagram the pH scale is 0 to 14, with 0 being very acidic and 14 very alkaline. 7 is neutral and for hot tubs the pH should be maintained between 7.0 and 7.6. The nature of the incoming mains water supply tends to determine the pH adjustment required.

Total Alkalinity

Total alkalinity is a measurement of the water's ability to resist pH change. If the total alkalinity is low then the pH can fluctuate making it difficult to control and maintain at the ideal level. If the total alkalinity is high then the pH can be difficult to change and will keep rising. A high total alkalinity can also lead to the formation of a bicarbonate scale on hot tub surfaces, within pipework and support equipment. If the total alkalinity of your hot tub water is below 80mg/l it should be increased using **AquaSPARKle TA Plus**. If the total alkalinity of your hot tub water is above 150mg/l then **AquaSPARKle pH Minus** can be used to lower it. When applying **AquaSPARKle pH Minus** to lower total alkalinity levels, the product should be pre-dissolved and then 'slug' dosed (dumped) into one area of the hot tub.

Calcium Hardness

Calcium hardness is the measure of how hard or soft the water is. The level will vary depending on the nature of the incoming water supply. The calcium hardness depends upon the amount of mineral salts (mainly calcium) that are dissolved in the water and the more salts there are the harder the water is. If the calcium hardness of your spa water is less than 100mg/l then it should be increased using **AquaSPARKle Hardness Plus**. If the calcium hardness of your spa water is greater than 200mg/l then **AquaSPARKle ScaleAway** should be used to help prevent scale deposits within the filter, heater, pipework and on spa surfaces.

Total Dissolved Solids (T.D.S.)

T.D.S is, as the name suggests, the sum of everything that is dissolved in the water including minerals, chemicals and bather impurities. The maximum recommended T.D.S level is no more than 1,000mg/l higher than the incoming fill water. Planned regular water replacement will normally prevent levels rising too high. High T.D.S. levels lead to:

- **Corrosion**
- **Reduced chemical efficiency**
- **Dull looking water**
- **Salty tasting water**
- **Increased chemical consumption**



Sanitise your hot tub water

The reason that sanitisers are used in hot tubs is to ensure that the water is healthy by controlling and killing bacteria. This is achieved by continuously and consistently maintaining a level of sanitiser (disinfectant) in the water.

Factory installed UV systems, Ozonators and similar water purification systems although providing improvement to the water quality are regarded as only secondary disinfection. It is essential that a primary sanitiser such as chlorine or bromine is used at all times.

Various factors may influence the maintenance of sanitiser present in the water. Factors such as bather numbers/organic loading, temperature, sunlight, turbulence and aeration will all affect the sanitiser levels.

Recommended free chlorine levels should be maintained between 3 – 5mg/l or total bromine between 4 – 6mg/l. The effectiveness of the sanitiser (especially chlorine) is directly related to the pH of the hot tub water.

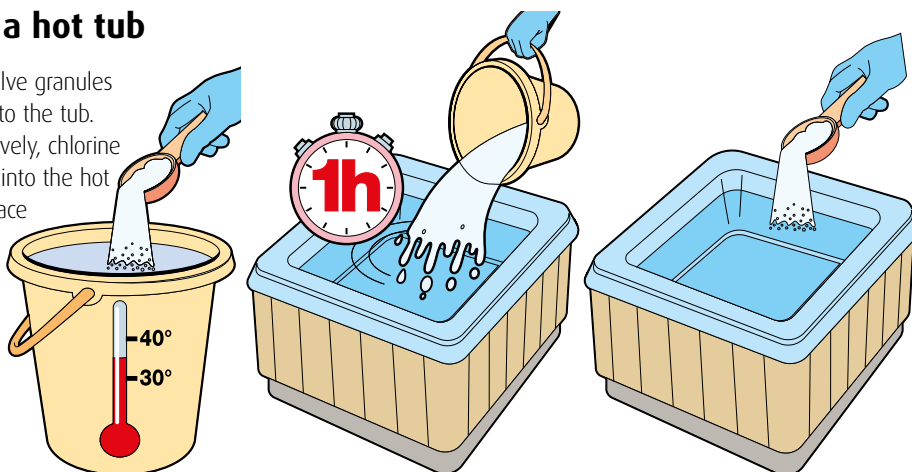
A variety of **AquaSPARKle** sanitisers are available but it is worth checking the hot tub manufacturer's instructions and warranty documentation before selecting. Further advice is always available from your nearest **AquaSPARKle** dealer.

How to apply sanitiser to a hot tub

If using chlorine or bromine granules, dissolve granules in warm water (30 - 40°C) prior to adding to the tub. Pour the solution into the hot tub. Alternatively, chlorine or bromine granules can be dosed directly into the hot tub. If using chlorine or bromine tablets, place the tablets in an inline disinfectant feeder.

Floating dispensers are not suitable for use in a business setting.

Never mix chemicals including household cleaners as a dangerous reaction may occur.



Chlorine

AquaSPARKle Spa Stabilised Chlorine Granules

A traditional granular chlorine that is popular with hot tub operators as it gives dose rate flexibility. These granules are rapid dissolving making pre-dissolving and application easy. The granules are close to pH neutral, so will have little effect on the pH level of your hot tub water.



AquaSPARKle Spa Multifunctional 20g Chlorine Tablets

AquaSPARKle Multifunctional Chlorine Tablets should be delivered via a dosing unit (inline feeder). When set up correctly the dosing unit will dispense the correct amount of chlorine into the hot tub to maintain the ideal free chlorine level of 3-5mg/l. Just top up the dosing unit with more tablets when required. Please note Spa Multifunctional Chlorine Tablets are designed to maintain chlorine levels (as they are slow dissolving), so before using, the correct chlorine level should be established using a rapid dissolving chlorine granule.



Bromine

Bromine is similar to chlorine in its effectiveness as a sanitiser but there are some important differences that make it an ideal product for using in a hot tub:

- Bromine tablets are dosed via an inline disinfectant feeder. **Floating dispensers are not suitable for use in a business setting.**
- Bromine retains better levels of efficiency over a wider pH band than chlorine, which makes it ideal for hot tubs as the pH can fluctuate a fair amount.

AquaSPARKle Spa Bromine Granules

AquaSPARKle Spa Bromine Granules are an effective sanitiser formulated to kill and prevent bacteria in hot tub water. Being a granular product, they are easy to dose and have a close to neutral pH so won't upset the water balance.



AquaSPARKle Spa Bromine Tablets

AquaSPARKle Spa Bromine Tablets should be applied via a dosing unit (inline feeder). When set up correctly, inline feeder will dispense the correct amount of bromine into the hot tub to maintain the ideal level between 4-6mg/l. Remember to top up the dosing unit as and when required. Please note, Spa Bromine Tablets are designed to maintain bromine levels as they are slow dissolving so establish sanitiser levels with a rapid dissolving granule first.



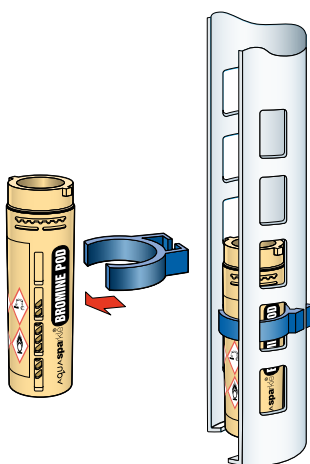
The AquaSParkle Bromine Pod

The AquaSParkle Bromine Pod is an innovative new product for the holiday let sector. AquaSParkle Bromine Pods are pre-filled adjustable sanitiser dispensers which give a continuous slow-release of high quality AquaSParkle bromine disinfectant for safe, convenient, and cost-effective sanitiser dosing.

Key Benefits:

- Pre-filled with high quality bromine disinfectant
- Adjustable output depending on bather load
- Up to six weeks sanitation per Pod
- Convenient and safe to use, no chemical handling
- Meets HSG282 requirements for continuous disinfection
- Simple in-filter installation keeps chemicals away from bathers
- Compatible with popular in-line dosing systems

USE IN A BUILT-IN PROPRIETARY HOT TUB DOSING SYSTEM (OR FRAME)

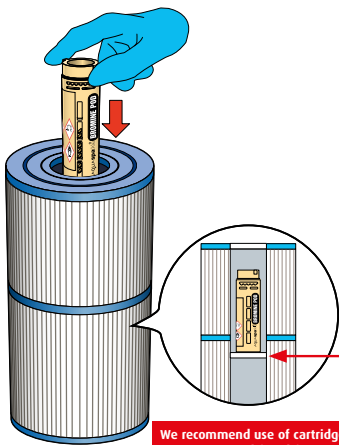


Attach the AquaSParkle Bromine Pod to the chemical dispenser frame or chamber using the adaptor clip provided. Ensure that the AquaSParkle Bromine Pod is firmly attached to the adaptor clip, and the adaptor clip is firmly attached to the chemical dispenser frame.

It takes a while for bromine tablets to begin to dissolve so it may be appropriate to first shock treat to immediately establish chlorine or bromine residuals. Add the appropriate amount of Spa & Spa Pod Rapid Shock as per product label dosing instructions. Always test your hot tub water prior to use and maintain bromine levels between 4 to 6 mg/l (ppm).

(this initial shock dose applies when using the AquaSParkle Bromine Pod in any of the 3 installations).

USE WITH A DARLBY SANISTREAM™ OPEN-TOP FILTER, OR OPEN-TOP FILTERS FITTED WITH A STOPPER DEVICE IN THE CENTRE OF THE CARTRIDGE

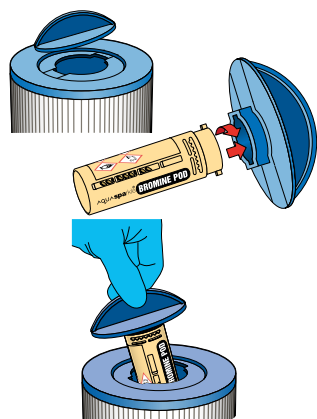


Retainer grid to prevent pod from damaging hot tub

We recommend use of cartridge filter with a retainer grid fitted for spa protection

To install the AquaSParkle Bromine Pod into an open ended cartridge filter lower the Pod ensuring the top is upright, until it rests onto the Pod retainer grid. Then install the cartridge filter in the hot tub.

USE WITH A DARLBY SANISTREAM™ HANDLE-TOP CARTRIDGE FILTERS, OR OTHER CARTRIDGE FILTERS THAT CONTAIN A CAP THAT ACCOMMODATES THE CLIP-IN OF THE POD LUGS



Ensure used with a compatible cartridge filter

To install the AquaSParkle Bromine Pod into a cartridge filter of the closed-cap type, first twist the handle anti-clockwise and remove the cap.

Install the AquaSParkle Bromine Pod in the cartridge filter cap by locating the two protruding lugs on the top of the Pod into the underside of the cap, then twist until it clicks to lock the pod in place.

Insert the AquaSParkle Bromine Pod and cap assembly into the cartridge filter by locating the lugs of the cap into the slots, then twisting clockwise to lock the cap into the cartridge filter. Then return filter to the hot tub.

Chemical Storage

Acids, alkalis and disinfectants should be stored appropriately in a secure, well-ventilated, dry storage area. Detailed storage information is provided on the safety data sheet available from your **AquaSParkle** dealer for each product.

Oxidise your hot tub water

Oxidising or shock dosing hot tub water is a term usually applied to the process of adding a higher than normal dose of oxidiser chemical to the hot tub water to control bacteria growth, destroy bather impurities or 'commission' the hot tub water from a fresh-fill.

AquaSParkle Spa Rapid Shock

A fast dissolving stabiliser-free chlorine granule that is recommended for the commissioning of hot tub water from a fresh-fill.



AquaSParkle Spa Non Chlorine Shock

A granular product that is ideal for the regular oxidation of hot tub water as it will destroy organic waste and chloramines without increasing the chlorine level. These granules can be used for chlorine or bromine treated hot tubs.

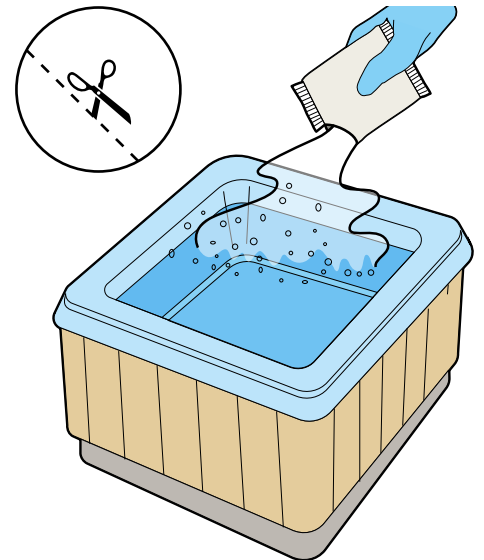


AquaSParkle Spa Fusion

Spa Fusion is the ultimate product for regular oxidation of hot tub water. Supplied in a convenient 35g sachet, this powerful oxidiser not only destroys bather wastes but also clarifies the hot tub water. This gives you water that looks great and is comfortable for bathers. As Spa Fusion is supplied in a pre-measured sachet, this makes application very easy. Simply cut the corner of the sachet with scissors and carefully sprinkle the contents over the spa water. No pre-dissolving is required. One 35g sachet is sufficient to treat up to 1,500 litres of hot tub water.



How to apply Spa Fusion



Shock Treatment Guide

Product	Spa Commissioning	Problem Solver	Rapid Spa Re-entry	pH Neutral
Granular Shock	✓	✓		
Spa Rapid Shock	✓	✓		
Spa Non Chlorine Shock		✓	✓	
Spa Fusion		✓	✓	✓

Cleaning

Floating debris such as suntan lotion, cosmetics and body fats will collect at the waterline and on hot tub surfaces providing a source of nutrients for bacteria growth. A good cleaning regime is an essential part of your operational procedure.

Action	Typical frequency
Clean the waterline	Check daily and clean as appropriate, always clean at water replacement
Clean overflows channels and skimmers	Check daily and clean as appropriate, always clean at water replacement
Drain spa and clean whole system including jets, headrests and hot tub cover inside and out	Weekly or at changeover
Replace cartridge filter with a cleaned cartridge	At changeover or weekly, whichever is shorter
Clean/purge spa pipework	Monthly

AquaSPARKle Surface Cleaner

This cleaner is easy to apply using a brush, sponge or cloth. Before applying Surface Cleaner ensure the area to be cleaned is wet then dispense a little on to the brush, sponge or cloth and gently apply it to the waterline. Leave it for a couple of minutes and then rinse area with plenty of water. Rubber gloves must be worn when using this product. After draining and before refilling the hot tub, Surface Cleaner should be used to clean all internal hot tub surfaces.



AquaSPARKle Immerse

A filter cartridge should be chemically cleaned regularly. Immerse has been designed to remove the grease and oils. This convenient 2 x 50g sachet is the ideal product to clean filter cartridges. Add Immerse into a clean plastic bucket containing clean water and stir well. Hose the cartridge to remove any loose debris, and then soak it in the cleaning solution for at least 8 hours. After soaking the cartridge, rinse it thoroughly with fresh water and if possible allow it to dry before returning it to the hot tub.



Ideal for deep cleaning

AquaSPARKle Instant Filter Cleaner

Instant Filter Cleaner will rapidly remove grease and oil from the filter cartridges, so should be used on a weekly basis or at changeover. Remove filter(s) from filter compartment and hose down with fresh water to remove loose matter. Thoroughly spray filter(s) with Instant Filter Cleaner taking care to penetrate veins with product. Leave the filter(s) to stand for 15 minutes then hose down thoroughly with fresh water. Always wear protective gloves & eye protection when applying this product.



Ideal for interim cleaning

AquaSPARKle Spa Cartridge Cleaner

This highly effective traditional cartridge cleaner is used in a similar way to Immerse (see above).



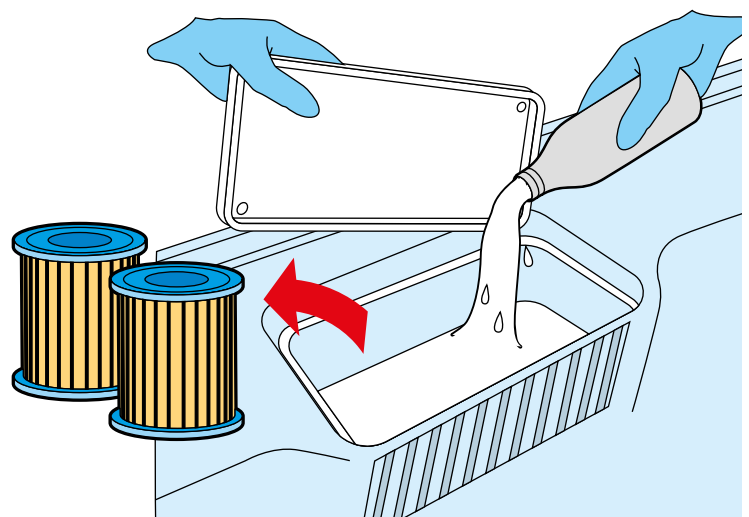
Ideal for deep cleaning

AquaSPARKle Hot Tub Flush

Hot Tub Flush has been formulated to remove the build-up of deposits in hot tub plumbing (pipework). This product should be applied just prior to draining the hot tub. Dose directly into the hot tub filter compartment with the pumps running. Leave for a minimum of an hour, then drain down and refill the hot tub with fresh water.



How to apply Hot Tub Flush



Important. All pumps need to be operating. Check to ensure all jets in the hot tub shell are open. Any diverter valves and air controls need to be operated several times to ensure that water circulates through all internal pipework, this includes any water fountain features. Also operate any aroma essence injection features by filling with hot tub water once treated with the Hot Tub Flush. Remove any in-line feeders (Frog cartridges/BROMINE PODS) and the spa filters / floating dispensers. Once the hot tub is drained, use of a wet vac will allow as much water to be removed as possible from the hot tub by inserting into the spa filter canister pipe work. Thoroughly clean the hot tub shell, inside the filter canisters and, using a vinyl cleaner, clean the underside of the hot tub cover.

Speciality Products

Clarifying

Hot tub water can become cloudy for a number of reasons:

- Incorrect water balance
- Poor or insufficient filtration
- Low levels of sanitiser
- A build-up of bather wastes

AquaSParkle Spa Sparkle will quickly restore water clarity, but check the above causes of cloudy water and action if necessary before applying **AquaSParkle Spa Sparkle**.

Dealing with foam

From time-to-time it is likely that foam will form on the water surface. This is usually caused by remnants of detergents left on bathing costumes after they have been washed. If possible it is always a good idea to encourage hot tub bathers to shower, with their costumes on, before using the hot tub as this will not only help in removing detergents but will also remove cosmetics and lotions from the body. If foam does appear on the water surface it can easily be destroyed by using **AquaSParkle Spa FoamAway**.

AquaSParkle Spa Sparkle

A clarifier in liquid form that can be used with all types of filtration systems. Spa Sparkle is added directly to the hot tub water with the pump running. Once applied it collects small particles and binds them together making larger particles that are much easier for the filter to remove.



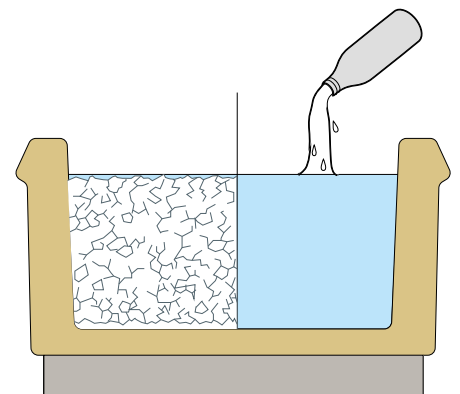
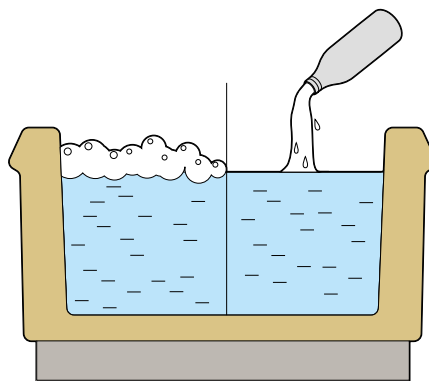
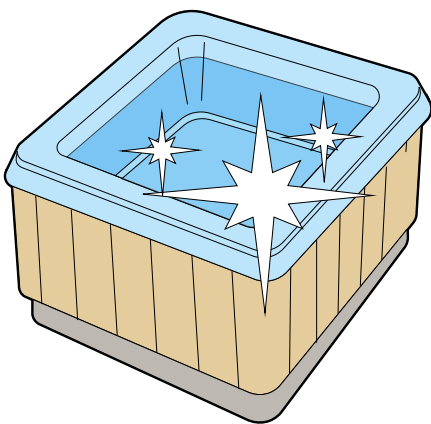
AquaSParkle Spa FoamAway

Use to destroy unsightly foam on the surface of hot tub water, this fast acting product quickly breaks the foam down. It comes in a liquid form that can be added directly to the hot tub water.



AquaSParkle Spa ScaleAway

A liquid product which will prevent scale deposits caused by mineral precipitation which can build up rapidly on hot tub surfaces due to high water temperatures. Dose weekly to prevent scale deposits within the filter, heater, pipework and on hot tub surfaces.





Draining and refilling

Although this is the last subject being covered within this guide it is a vital part of any hot tub management programme. Over time, the water can become 'stale' as it absorbs minerals, chemicals, bather wastes and other soluble materials that cause the total dissolved solids level (T.D.S.) to increase.

Where a hot tub is used as a business activity, the total water volume should be replaced each week or after each group of users, if this is earlier.

Action	Frequency
Drain hot tub and clean whole system including jets, headrests and hot tub cover inside and out.	Weekly or at changeover

Remember, after draining and before refilling, clean all the hot tub internal surfaces with **AquaSPARKle Spa Surface Cleaner** and replace the cartridge filter with a cleaned cartridge. Clean the dirty cartridge element with **AquaSPARKle Immerse, Instant Filter Cleaner or Spa Cartridge Cleaner**.

Remember, if the hot tub is going to be left empty for a period of time, it should be treated with a high dose of sanitiser before being switched back on (**see commissioning the hot tub**).

General Hot Tub Safety – Recommended advice for bathers

- Don't allow water temperatures to exceed 40°C (lower for children)
- Use the toilet and shower before entering the hot tub
- Don't wear suntan lotions, spray tans or skin creams
- Don't use the hot tub after a heavy meal or under the influence of alcohol or sedatives
- Don't exceed 15 minutes immersion at a time
- Don't exceed the maximum number of bathers (one per seat)
- Seek medical advice if pregnant or have a medical issue
- Supervise all children in and around the spa pool and do not allow children under 4 years of age, or those unable to keep their head above the water level when sitting, in the hot tub
- Never leave children unattended in the hot tub

General Chemical Safety

- Always read the instruction label on chemical products
- Always adhere to the instructions printed on the product label
- Always handle chemicals in a well-ventilated area, preferably outdoors
- Always keep chemicals out of the reach of children
- Always wash hands after handling chemicals
- Always store chemicals in a cool, dry place
- Always put the lids back on chemical containers
- When pre-dissolving products always use a clean container
- Never use chemicals that don't have an instruction label
- Never mix chemicals
- Never dose chemicals when there are bathers in the spa



Complete Pool Controls Ltd
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Technical Helpline: 0371 222 9084

Technical Support

This guide is quite comprehensive but if you require further technical support, please contact your AquaSPARKle Supplier or use the Technical Helpline number above.

www.aquasparkle.co