

# INTRODUCTION



As the owner of a new swimming pool you are to be congratulated. Years of recreation, relaxation and therapy await you, your family and your friends. While others sit around dreaming of cool comfort, you have made dreams come true right in your own backyard. So go ahead and enjoy all of the benefits of pool ownership. But before dipping into your new pool, take some time “dipping” into the information we have provided in this interactive SPARCO pool manual program.

To operate your pool safely and trouble-free you need to know the basics of pool care. If you understand and follow a good maintenance routine- with proper filtration, balanced-pool water and a consistent chemical program, your pool water will be sparkling clean and easy to maintain. Preventative maintenance will save you time and money by correcting water problems before they occur, while protecting your pool and equipment from damage caused by imbalanced pool water.

The amount of water in your pool is a figure you will reference often for chemical adjustments. If you do not know the water capacity of your pool you can use this software to calculate by clicking on Water Analysis at the main menu and entering the dimensions of your pool. We recommend that you fill out the following page and record all pool information including water capacity, equipment models, serial numbers, etc. This information along with any warranty papers and owner’s manuals that came with your pool should be kept on file for future reference.

As a pool owner it is your responsibility to make your pool environment as safe as possible. Please read all of the safety information provided with your pool and follow the [swimming pool safety information](#) within this manual. The APSP (Association of Pool & Spa Professionals) publishes several pool safety pamphlets that can be obtained online at [www.theapsp.org](http://www.theapsp.org) or by calling 703-838-0083. Warning signs or notices supplied by the manufacturer should be posted



or applied where they are visible to pool users. Throughout this pool manual you will find hyperlinks in [blue underlined text](#). When you installed the program you were asked to select specific equipment for your pool. If you need to make a change to the sanitizer or equipment selections after installation of the software, go to the Main Menu/Test Water. If you have already entered the capacity of your pool, use the previous button at the bottom of the window. There you will see the Change Settings option. To

change settings you will need an active internet connection.

Remember, if you encounter questions or concerns our staff is always here to help you. Please don’t hesitate to stop by your nearest Pools & Spas A Go-Go store or give us a call. Our contact information can be found in the [Contacts](#) page. For questions or technical concerns related to your software please contact Pool Software directly for customer support: online at [help@poolsoftware.com](mailto:help@poolsoftware.com) or by phone toll-free at 800-899-7479.

**Welcome to Pools & Spas a Go-Go We’re glad you’ve joined us for many summers of fun!**

## BERKLEY

2750 W. 12 Mile Road  
2 1/2 block W. of Coolidge  
Tel: (248) 398-4577

## UTICA

48270 Van Dyke  
4 Blocks South of 22 Mile  
Tel: (586) 739-5333

## ROCHESTER HILLS

3100 S. Rochester  
1 Block North of M-59  
Tel: (248) 852-8900

[www.pasagg.com](http://www.pasagg.com)

# SWIMMING POOL OWNER'S RECORD

It is recommended that you print this page and record the completed information. If you have any questions you can take this paper to your Pools & Spas A Go-Go salesperson for assistance. Once completed you should maintain this Owner's Record on file along with any warranty papers, instructions and owner's manuals that came with your pool.

*TO PRINT: Click on File upper left corner of the toolbar), Print, Go to Page Range and click on Current Page (otherwise you may print the whole manual).*

**NAME** \_\_\_\_\_ **DATE INSTALLED** \_\_\_\_\_

**POOL TYPE** \_\_\_\_\_ **POOL SIZE** \_\_\_\_\_

**WATER CAPACITY\*** \_\_\_\_\_ (gallons) **POOL FINISH** \_\_\_\_\_

*\*go to Test Water for an estimated calculation if you don't know the gallons in your pool.*

**POOL EQUIPMENT** – list Manufacturer (make), model name and number and serial number\*  
*\*this information can typically be found labeled on the equipment*

## **FILTER**

Make \_\_\_\_\_ Model \_\_\_\_\_ Serial# \_\_\_\_\_

Filter Media \_\_\_\_\_

*NOTES:* \_\_\_\_\_

## **PUMP & MOTOR** *\*recommended run time 10-12 hrs per day.*

Make \_\_\_\_\_ Model \_\_\_\_\_ Serial# \_\_\_\_\_

*NOTES:* \_\_\_\_\_

## **HEATER / HEAT PUMP**

Make \_\_\_\_\_ Model \_\_\_\_\_ Serial# \_\_\_\_\_

*NOTES:* \_\_\_\_\_

## **OPTIONAL EQUIPMENT** (Light, pool cleaner, chlorinator, timer, controller, etc.)

\_\_\_\_\_ Make/Model \_\_\_\_\_ Serial# \_\_\_\_\_

\_\_\_\_\_ Make/Model \_\_\_\_\_ Serial# \_\_\_\_\_

\_\_\_\_\_ Make/Model \_\_\_\_\_ Serial# \_\_\_\_\_

\_\_\_\_\_ Make/Model \_\_\_\_\_ Serial# \_\_\_\_\_

*NOTES:* \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## WATER TESTING

All water is not alike. Although two atoms of hydrogen and one of oxygen form the liquid we call water, within this liquid are dozens of other elements. Trace metals, minerals like calcium and sodium, dissolved gasses like nitrogen and carbon dioxide, and living organisms like bacteria, algae, mold and fungus, not to mention all the other chemicals we add deliberately are found within water. Water is the universal solvent. That means virtually any element that occurs in nature can be picked up or dissolved into solution in water.

Swimming pool water has chemical characteristics which must be measured regularly. All of our stores offer professional, computerized water analysis. Have your water professionally tested **PRIOR** to adding any chemicals and again every 4-6 weeks. Additionally, you will be testing your water at home 2-3 times per week for Sanitizer and pH, as these levels can quickly change.

When testing your pool water take a sample from approximately 12" below the water's surface and away from any return inlets. You can enter your test results into the computerized water analysis software within this manual, Test Water at the main menu, and receive accurate chemical recommendations and dosages to maintain balanced pool water.

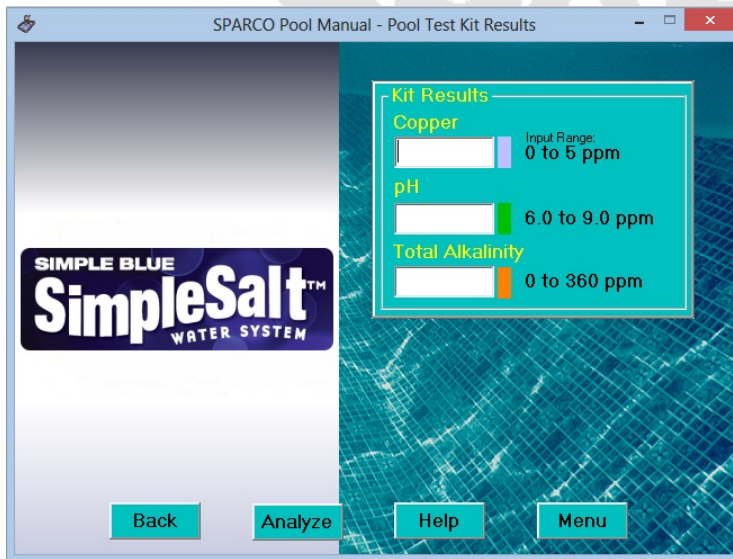


**Test Strips** –provide quick and accurate results for a variety of water tests. A typical 3-way test strip will provide sanitizer (Free chlorine or biquanide), pH and Total Alkalinity readings. As with any test kit, there are several factors that can be controlled to insure the validity of the test results. Following are some guidelines for using test strips to obtain accurate water analysis results.

- **Follow the directions that came with the kit.** Sounds simple, doesn't it? However, there have been many cases where a user inadvertently used the directions that came with another manufacturer's strips or used directions from an older kit. Most inaccurate test results occur when individuals do not follow directions or follow the wrong directions! Test strips are continually improving and becoming more accurate, and you should never assume that the directions on one container are going to apply to another container's strips. In addition, not all manufacturers' test strips are the same, so it is essential to read and follow the directions on each container.
- **Store test strips in a low humidity environment at room temperature.** Test strips will be most effective over a long period of time if they are stored properly. Suitable storage will give you confidence in your results until the product has reached the date of expiration.
- **Keep the cap on tight between uses.** Doing this will prevent moisture from entering the bottle of unused strips. It is important that moisture not be introduced to the test strips until you use them in your pool or spa.
- **Keep wet fingers out of the bottle.** The test strips won't know the difference between the water on your fingers and the pool or spa water! So, make sure that the only water your test strips are reacting with is the pool or spa water you intend to measure.
- **Do not use expired test strips.** Most containers of test strips will display an expiration date somewhere on the container. Always be aware of this date when using or purchasing test strips. Regardless of how the container has been stored or handled, test strips have a definite shelf life and should not be used after the product has expired. Using test strips after this date will likely lead to inaccurate results. Therefore, replace any bottles that have expired.

## WATER TESTING SOFTWARE

Your Pools & Spas A Go Go Pool Manual includes a water analysis testing program, TestMate 4 Pools™. As mentioned earlier it is a good idea to test your pool water at least two to three times a week. If the sanitizer, pH or alkalinity tests are not in the acceptable ranges you will want to go to the water testing button on the main menu. Here you will enter your test results and receive chemical recommendations with dosages to balance your pool water. Maintaining a consistent chemical routine is extremely important in keeping your pool clean, clear and healthy. Once you have started on a chemical program stick with it. Chemical brands can vary quite a bit and mixing different chemicals can be dangerous. If you follow our recommended chemical routine along with good pool maintenance (vacuuming and filtration) your pool will look great and be easy to maintain. TestMate will help you save time and money using only the chemicals you need, when you need them.



Be sure to have your pool water professionally tested at Pools & Spas A Go-Go at the beginning of every season, every 4-6 weeks throughout the summer, and any time you are experiencing a water problem. When performing in-store water analysis a wide range of tests are performed to be certain that your water is balanced. Your TestMate water-testing program will help you to maintain that balance throughout the season. Of course if you are experiencing a water problem beyond your basic: sanitizer, pH or alkalinity tests you should bring us a water sample for a complete analysis.

**ALWAYS READ ALL CHEMICAL INSTRUCTIONS AND FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR SAFETY WHEN HANDLING AND STORING ANY CHEMICALS.**

If you are experiencing any difficulty with the operation of this software please contact Pool Software at [help@poolsoftware.com](mailto:help@poolsoftware.com) or by calling 800-899-7479. If you are having difficulty maintaining your pool or with the chemistry, of your water please contact your Pools & Spas A Go-Go professional.



# WATER BALANCE

At Pools & Spas A Go-Go we will be happy to assist you in choosing the chemical treatment program that is right for you. Each of our chemical programs is discussed under the Chemical Treatment section. Certain tests are specific to each program: sanitizers, sodium chloride, cyanuric acid, etc. Those levels and chemicals to adjust those items will be discussed under their specific program. In this section we will be discussing Water Balance parameters, testing and the chemicals used to adjust and balance water. The factors that define water balance are:

- pH
- Total Alkalinity
- Calcium Hardness
- Total Dissolved Solids
- Metal Content

Balanced water is vital for bather comfort, effectiveness of your sanitizer and protection of pool and equipment from corrosion or scaling. You will be testing and maintaining your pH and Total Alkalinity on a regular basis, 2-3 times per week. Here at Ace we will test for TDS, Calcium Hardness and Metal content on initial fill or start-up and every 4-6 weeks throughout the season.

## **pH**

pH is the number that characterizes the acidic or basic characteristics of the pool water. Measured on a scale from 0-14, 7 being neutral. pH is the single most important element in swimming pool water chemistry. It affects every other chemical balance in pool water. pH is the measure of acid vs. base of a solution. It is important to maintain a pH reading between 7.2 to 7.8 for SoftSwim treated pools and 7.4 to 7.8 for chlorinated pools, ideally at 7.6. The type of sanitizer you use can affect your pH as does rain water, plaster and many other things, requiring you to test and adjust your pH on a regular basis.

### **Ideal ranges 7.4 – 7.6**

#### **High pH (over 7.6) water is too alkaline**

- Promotes scale
  - Scale will form on the pool surface.
  - Scale in a heater decreases efficiency 10%.
  - Scale in a sand filter channels the sand around the bed, making filter inefficient.
  - Scale in a light niche will insulate it and cause it to over heat.
  - Scale in DE and cartridge filters can destroy material.
- Promotes cloudy water
- Swimmers will complain of dry skin and irritated eyes
- Causes sanitizer to be less effective

#### **To lower the pH add BioGuard Lo 'N Slo per label directions**

Please make note of the following when you are lowering your pH:

- After application circulate water for 2 hours and then retest pH.
- Never add more than 1 1/2 lbs. of Lo 'N Slo or pH Decreaser per 10,000 gallons at one time
- Do not add near metal fittings nor allow pH to drop below 7.2
- Do not allow un-dissolved lumps to remain on the pool bottom. Break up with brush.



## Low pH (below 7.2) water is too acidic

- Promotes corrosion
  - Corrosion in vinyl liners causes it to lose its plasticizers-causing wrinkles.
  - Corrosion in equipment causes pitting.
- Promotes clear water-hard to tell something is wrong.
- Will irritate swimmers' skin and make eyes red.
- Causes sanitizer to be used up quickly.

**To raise pH** use BioGuard Balance Pak 200 per label directions.

- After application continue to circulate water for 2 hours and retest pH.
- Add a maximum of 1 lb. per 10,000 gallons of water per application.



## Total Alkalinity (TA)

Total Alkalinity is a measure of the ability of the water to resist pH change. This test measures the concentration of carbonates, bicarbonates, silicates, borates and other chemical compounds that contribute to Total Alkalinity. If the total alkalinity is within range it acts as a buffer against changes in pH. So if it rains heavily or a lot of people are in for a swim, the Total Alkalinity absorbs the shock of pH changing events and the pH doesn't "bounce" or move up and down frequently.

### Ideal ranges

All pools 125-175

### High TA (over 180)

- Promotes scale
  - Scale can form on the pool surface.
  - Scale in a heater decreases efficiency 10%.
  - Scale in a sand filter channels the sand around the bed, making filter in-efficient.
  - Scale in a light niche will insulate it and cause it to over heat.
  - Scale in DE and cartridge filters can destroy material.
- Promotes cloudy water.
- Swimmers will complain of dry skin and irritated eyes.
- Causes sanitizer to be less effective.

**To lower Total Alkalinity** add BioGuard Lo 'N Slo per label directions.

- After application circulate water for 2 hours and then retest pH.
- Never add more than 1 1/2 lbs. 10,000 gallons at one time
- Do not add near metal fittings nor allow pH to drop below 7.2
- Do not allow un-dissolved lumps to remain on the pool bottom. Break up with brush.



## Low TA (under 100)

- promotes corrosion.
  - Corrosion in vinyl liners causes it to lose its plasticizers-causing wrinkles.
  - Corrosion in equipment causes pitting.
- promotes clear water-hard to tell something is wrong.
- will irritate swimmers' skin and make eyes red
- causes sanitizer to be used up quickly.



To raise TA add Balance Pak 100 per label directions.

- If large amounts are required (more than 4 lbs. per 10,000 gallons) and metals are present, divide dosage into thirds and pre-dissolve before addition.

## Calcium Hardness

Water is a universal solvent. Given enough time, pressure and temperature water will dissolve most metals or minerals into a solution. Because of this tendency, any minerals that are present in the water's environment will ultimately end up dissolved in the water. Though calcium is not the only mineral in water, it is certainly the most prevalent. When detergent manufacturers were recognizing the characteristics of how their soaps performed in different types of water, they noted that water with high mineral levels were hard for soap to suds-up. So, water that easily suds-up with soap is said to be soft.

Calcium Hardness in a pool is an important water balance characteristic. Pool water that has too little calcium is likely to be aggressive. The water needs to satisfy its mineral appetite and it looks for the most vulnerable means to satisfy this mineral hunger.

## Ideal ranges

175-225 ppm for vinyl, painted, fiberglass pools  
200-250 ppm for plaster pools

## High Calcium Hardness (over 300)

- promotes scale
  - Scale will form on the pool surface.
  - Scale in a heater decreases efficiency 10%.
  - Scale in a Sand filter channels the sand around the bed.
  - Scale in a light niche will insulate it and cause it to over heat.
  - Scale in DE and Cartridge Filters can destroy material.
- promotes cloudy water
- swimmers will complain of dry skin and irritated eyes
- causes sanitizer to be less effective

To lower calcium hardness requires draining water from the pool.



**DO NOT** drain water until you consult with your Pools & Spas A Go-Go professional as to how and how much to drain. Scale Inhibitor would be recommended for maintenance to help stop calcium from sticking to surface. **Vinyl pools should not be drained without professional advice.** Scale Inhibitor will help inhibit scale formation. Add monthly by sprinkling in front of returns at a rate of 16 oz. per 10,000 gallons of water, watch filter pressure and backwash if necessary.

### Low Calcium Hardness (below 150 ppm for vinyl)

- Promotes corrosion
- Corrosion in vinyl liners causes it to lose its plasticizers-causing wrinkles.
- Corrosion equipment causes pitting.
- Promotes clear water-hard to tell something is wrong.
- Will irritate swimmers' skin and make eyes red.
- Causes sanitizer to be used up quickly.

To raise calcium hardness add BioGuard Balance pak 300 per label directions.



Low calcium pools have a tendency to foam as they are too soft they become sudsy!



### TDS

TDS is the measurement of the total dissolved solids in the water. Remember water is a universal solvent. Metals, minerals, salts, chemicals, organic waste-virtually everything water contacts goes into solution. Everything dissolved in the water is measured. When too many are in solution several problems occur. Over time the TDS levels in your pool water will increase.

### Ideal range

Should not be left to exceed 1500 ppm

### High TDS Levels (over 1500 ppm)

- Water becomes hazy.
- Sanitizer is less efficient, TDS decreases its ability to attack bacteria and inhibit algae.
- Filtration will NOT remove dissolved solids in the water.

To lower TDS requires draining water from the pool.



**DO NOT** drain water until you consult with your Pools & Spas A Go-Go professional as to how to and how much to drain. **Vinyl pools should not be drained without professional advice.**

### METALS

There are various metallic substances that can be found in pool water (copper, iron, manganese, etc.) which can cause staining and discoloration in your pool. These substances can occur naturally from the water used to fill the pool or from metallic pool equipment parts if water has been acidic or corrosive. Any time metal objects such as poles, toys, and tools that fall into the swimming pool, they can release iron and copper into the pool water. These local deposits of metal can cause discoloration of the pool surface. Pools & Spas A Go-Go will test the water used to top up (fill) your pool for the presence of metals and recommend the appropriate course of chemical action **PRIOR** to the addition of any chemicals. **PREVENTION** is much easier than treatment, especially when it comes to metals. The recommendations below are for preventative maintenance, your Pools & Spas A Go-Go professional may recommend a specific course of action to remove metals if they test high and what you should use to treat the water. To Prevent Metal staining or discoloration Pool Magnet Plus may be used at start-up and on a weekly basis as directed.



## **SANITIZING YOUR POOL**

Clean, clear, healthy pool water is the result of proper sanitation, filtration and circulation. The term sanitize means to *kill all disease-causing organisms*. The sanitizer is the key component of your chemical program. In order to be effective, a chemical program used to treat pool water must not only sanitize but also disinfect – *kill all living organisms* and oxidize- *destroy organic waste*.

There are many sanitizer options available today. A member of our staff will be happy to assist you in selecting the program that best suits your pool type, geographic region and lifestyle. Once you find a sanitizer program that works for you stick with it! Maintaining a consistent level of sanitizer in your water will prevent bacteria and algae growth and provide sparkling clear water.

Many swimming pool products are incompatible and should not be used with certain sanitizers, alternative sanitizers or pool types. Again, it is best to stick with the products offered in your brand specific chemical program.

**[CLICK HERE FOR COMPLETE INSTRUCTIONS  
FOR YOUR SANITIZER](#)**

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The basics of water chemistry, found within this manual, explains the importance of water chemistry and the role that water balance plays in the effectiveness of your sanitizer. Be sure to review this section, [see \*Basics of Water Chemistry\*](#).

Each chemical program requires specific handling and storage precautions. Please read and follow all label directions as well as the safety recommendations listed in [Chemical Safety](#). In all cases chemicals should be kept in a dry location out of the reach of children.



## ***ALTERNATIVE SANITIZERS***

Alternative sanitizers include water treatments, other than chemical sanitizers, that are used to treat the water. There are many alternative sanitizer options available today. Your pool dealer can explain the pros and cons of each and help you in choosing a sanitizer or alternative sanitizer program that will best suit your needs. Alternative methods of sanitation greatly reduce the chemicals required to maintain your pool while offering other benefits as well. These benefits vary according to the treatment type but often include increased bather comfort due to less chemical use. Most alternative sanitizers still require a supplemental halogen sanitizer (chlorine or bromine), but at much lower residual levels. Some types of alternative sanitizers can be combined in parallel to increase the overall benefits and or replace the need for a supplemental chemical sanitizer. Mineral Sanitizers include catalytic sanitizers such as Nature<sup>2</sup> and FROG products. Other Alternative Sanitizers would include ozonators and UV.

[\*\*\*CLICK HERE FOR YOUR MINERAL SANITIZER OWNER'S MANUAL\*\*\*](#)

[\*\*\*CLICK HERE FOR YOUR OTHER ALTERNATIVE SANITIZER OWNER'S MANUAL\*\*\*](#)

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## **SHOCKING or SUPERCHLORINATION**

When you shock your pool you use the process of oxidation to chemically remove (burn up) organic debris, such as body waste, particulate matter and perspiration, from the water. All pools require a shock treatment on a regular basis to maintain optimum water quality. Routinely shocking the water every week will greatly increase the quality of your pool. In addition to oxidizing undesired wastes – shocking water will help rid the pool of algae and bacteria that might be hiding in filters and hard-to-sanitize areas.

Contrary to what most people think, a strong chlorine smell is not an indication of too much chlorine in the pool but actually a red flag that a super dose may be required to correct the problem. In chlorine treated pools shocking can be achieved by superchlorination (adding a much higher chlorine amount than normal). Hypochlorous acid is the form of chlorine that provides sanitation. Hypochlorous acid is very active and will react with ammonia and other nitrogen-containing organic compounds (i.e., perspiration, urine, etc.) and form chloramines. This “combined chlorine” is 40 to 60 times less effective than free available chlorine. Combined chlorine, in addition to reduced effectiveness against bacteria can cause eye irritation and so called “chlorine odor.” This may also result in a dull or flat look to your pool. A properly balanced and chlorinated pool will have no discernible odor.

### **WHEN TO SHOCK**

Weekly as part of your routine chemical maintenance. There are times when you may need a supplemental shock as well, these are the as needed situations that follow:

As Needed:                    At the first signs of visible algae (slippery walls or floor)  
                                      Cloudy water (check water balance as well)  
                                      Heavy rains or storms (increase organic debris in water)  
                                      Heavy bather load (after the pool party!)



The chemicals used for shock treatments are powerful oxidizers. **CAREFULLY** read and follow the recommendations in the [Chemical Safety-oxidizers](#) section.

- ✓ It is most effective to shock in the evening as chlorine shock dissipates very rapidly in sunlight.
- ✓ If you are using a chlorine shock treatment you will have a very high chlorine reading (10 ppm or higher). You must allow the Free Chlorine level to drop back down to the safe range of 3 ppm or lower before re-entering the pool. This can take up to 24 hours, so plan accordingly when super chlorinating or use a non-chlorine shock if the pool is to be in use sooner. Non-chlorine shock treatments allow you to re-enter the pool within 15 to 30 minutes after treatment. **SoftSwim users should ONLY shock using SoftSwim C.**



## SPECIALTY CHEMICALS

There are many specialty chemical products available today to treat a wide range of water problems while reducing chemical usage and maintenance time. If you are using *SoftSwim* in your pool you should use the specialty products listed in that section- as not all of the specialty chemicals listed below may be compatible with your program.

### Algae Treatment-

As discussed early in this manual, prevention is always preferable to treatment when it comes to water problems. Maintaining the proper level of sanitizer in your pool is critical to the prevention of algae. In addition there are algae inhibitors that can be routinely added to prevent algae growth and algae killers that can be used if an algae problem occurs.

### Algae Inhibitors-

Smart Algicide is BioGuard's best preventative Algicide. This patented, non-foaming formula prevents green, mustard, and black algae from forming in all types of swimming pools. Smart Algicide contains a patented chelant that prevents staining that commonly occurs with other copper based algicides. Include Smart Algicide or BioGuard Back-Up Algae Inhibitor at a rate of 2 ounces per 10,000 gallons of water.



**Algae Killers-Banish** is a fast-acting, highly effective, patented, non-foaming algicide that produces results in 24 hours! It kills all types of algae in swimming pools. Thanks to a patented chelant, Banish also prevents staining that commonly occurs with other copper-based algicides. Fast-acting formula produces results in 24 hours while allowing swimmers to return to water soon after treatment. Add 16 oz. per 10,000 gallons of water-pouring directly over algae. Treatment of an existing algae problem will also include shocking the pool with BioGuard Burn Out 1 lb. per 10,000 gallons (SoftSwim users shock with SoftSwim C) [See Shocking and Superchlorination](#) for details.

### Chelating or sequestering agents- Stain Preventors

If metals or minerals are present in pool water we may recommend a chelating or sequestering agent to prevent staining or scaling by binding metals or minerals together so they will not precipitate (fall out of solution). These products work best to prevent discoloration **PRIOR** to the use of any chemicals so remember to have your water tested for metals at Ace **BEFORE** adding chemicals.

### Clarifiers

BioGuard Natural Clarifier uses a natural ingredient, Chitosan, to help keep your pool water sparkling and your filter working at peak efficiency. Chitosan is produced from the exoskeletons of crustaceans (such as crab and shrimp). It causes fine sediment particles to bind together to make big particles that are removed by your filter, significantly improving your filters efficiency, and giving you clear sparkling water. [See Cloudy Water.](#)

### Enzyme Products

White River Pool Pizazz uses natural enzymes to gently but powerfully break down sun-tan oils, body oils and other organics in the water. A weekly addition of 1 oz. per 8,000 gallons of Pool Pizazz can reduce foaming and scum-lines, increase water clarity and decrease backwashing frequency. For best results, dilute it in 5 parts water, mix and dispense around pool. Heavily used pools may require treatment every 3-4 days. **DO NOT** add Pool Pizazz immediately before or after shocking the pool.



## Flocculants

Power Floc is used to treat extremely cloudy water by binding suspended particles and settling to the pool floor. This treatment involves loss of water as the settled material should be vacuumed to waste (by-passing the filter system) so you should consider your water level prior to use. CARTRIDGE FILTER OWNERS- See an Ace representative before using this product. Read label directions for application instructions [See Cloudy Water](#)



## Filter Cleaners

Generally, your filter should be chemically cleaned 1 to 3 times per season using Strip

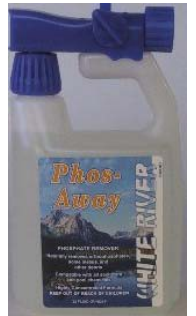


Kwik & Kleen It. Strip Kwik removes oils and grease from all types of filters, acting like a shampoo for the filter. Kleen it uses a dual action formula designed to remove scale, dirt and debris.

- Promotes greater filter efficiency
- Keeps water clearer
- Reduces maintenance costs
- Can reduce chemical use
- Lengthens the life of the filter media

## Phosphate Treatment

Phosphates are a primary nutrient for algae- by removing the food source pool water becomes much less inviting for algae growth. A well maintained pool with proper sanitizer levels should not experience algae problems, but the higher the phosphate level goes, the more algae flourishes and the more resistant it becomes. In most cases phosphates enter the pool in the fill water, which runs from 100 parts per billion (ppb) to more than 1,000 ppb (many water districts add phosphates to their water to inhibit corrosion). Other sources include rain water, fertilizers, some pool chemicals, organic debris (like bark or leaves) and people. In other words, phosphates are always entering a pool. We recommend a start-up dosage of **White River Phos Away**, 1 bottle to treat up to 24,000 gallons at the start of each season- to help prevent algae.



## Tile & Vinyl Cleaner

You should clean the waterline of the pool often to prevent a scum-line from forming. Off The Wall™ is a heavy-duty, non-abrasive surface cleaner that removes scale and hard water deposits, grease and dirt along the water line.

**CAUTION:** When using any chemical you should always read the label directions for usage and handling instructions. Follow all safety guidelines on the bottle as well as the [Chemical Safety](#) recommendations found within this manual.

# CHEMICAL SAFETY

To handle swimming pool chemicals safely they must be used and stored properly. Problems occur when careless mistakes are made. By reading and following the label instructions along with some easy safety rules below, accidents can be prevented. In addition to these safety recommendations be certain to always read and follow the directions on the bottle label.



MSDS should be available on the chemical company's website or telephone hotline for specific safety and handling instructions. In the event of an emergency that requires medical treatment have the product container on hand and immediately call 911 or U.S. Poison Control at 1-800-222-1222

1. FOLLOW INSTRUCTIONS CLOSELY: MIX CHEMICALS ONLY AS INSTRUCTED.
2. NEVER add water to chemicals—add chemicals to water slowly.
3. ALWAYS use the exact dosage specified on the label by the manufacturer.
4. PROTECT eyes with glasses or a mask when handling chemicals.
5. ALWAYS open product containers in a well-ventilated area.
6. NEVER mix different chemicals together. This can produce a chemical reaction that can lead to a fire, toxic fumes or explosion.
7. ALWAYS use a clean dipper or scoop; free of oil, grease, or insecticides. Even a small amount of residue can combine with the chemicals and produce a danger.
8. ALWAYS keep chemicals in their original containers, tightly sealed.
9. STORE your chemicals in a clean, dry, well-ventilated area away from household items such as fertilizer, gasoline, oil, or other cleaning solutions.
10. NEVER store any liquid products directly over or directly next to dry pool products (trichlor, granular chlorinators, shock products).
11. KEEP liquid acid (muriatic) and liquid chlorine products away from each other and away from all shock products and chlorine-based products.
12. SEPARATE your pool care products with an empty space (at least 3 feet) as a buffer zone between products.
13. CAREFULLY read the active ingredient section on the front of the product label to determine what acids, balance chemicals, or oxidizers it contains.
14. ALWAYS clean up spills immediately with a clean broom or dust pan. Dispose of spilled materials in clean container. DO NOT PUT SPILLED CHEMICALS BACK IN THEIR ORIGINAL CONTAINER. The chemical may have been contaminated.
15. REMEMBER to rinse plastic dispensing containers with water after use.
16. KEEP chemicals away from electrical equipment and open flames.
17. NEVER FLUSH excessive amounts of chemicals down storm sewers. In case of large spills, contact your local fire department for assistance.
18. ALWAYS wash hands thoroughly after handling chemicals.



## **ACIDS AND OXIDIZERS SAFETY**

**Acids-** highly corrosive substances and must be handled with extreme care. Muriatic acid (Hydrochloric acid) and Sodium bisulfate are acids most commonly used in the care of pools.

### Protective Equipment

- Eyes-goggles or full face shield when splashing may occur
- Hands-gloves (rubber, neoprene, or PVC)
- Body-coveralls and impervious boots
- Lungs-proper ventilation

### Handling Precautions

- DO NOT take internally
- Avoid contact with eyes, skin or clothing
- Upon contact with skin or eyes, rinse with water
- Avoid breathing vapor (muriatic acid) and dust (sodium bisulfate)
- Store all containers in a cool, dry place
- *Always add acids to plenty of water...Never add water to acids*

### Conditions and Materials to Avoid

- Avoid contact with strong alkalis such as caustic soda, sodium carbonate, etc
- Avoid contact with all oxidizers
- Do not store in wet or moist conditions

**Balance Chemicals-** Although acids are balance chemicals, they have be treated separately. The balance chemicals Sodium bicarbonate, Sodium carbonate, and Calcium chloride are all basic (high pH) and increase pH, TA and Calcium Hardness.

### Protective Equipment

- Eyes-goggles
- Hands-gloves (rubber, neoprene, or PVC)

### Handling Precautions

- DO NOT take internally
- Avoid contact with eyes, skin or clothing
- Avoid breathing dust, spray or mist
- Store containers in a cool, dry place
- Always keep containers tightly sealed
- *Caution: DO NOT MIX balancing chemicals with anything other than water*

### Conditions and Materials to Avoid

- Avoid contact with acids
- Avoid contact with organics and oxidizers
- Do not store near acids

**Oxidizers-** The precautions for oxidizers are important in handling the following: Calcium hypochlorite, Lithium hypochlorite, Sodium hypochlorite (Liquid shock, Bleach), Trichlor, Sodium dichlor, Bromine, Potassium peroxymonosulfate (Oxy shock, Non-chlorine shock).

### Protective Equipment

- Eyes-goggles
- Hands-gloves (rubber, neoprene, or PVC)
- Lungs-provide ventilation where dust is likely

### Handling Precautions

- DO NOT take internally
- Avoid contact with eyes, skin or clothing
- Upon contact with skin or eyes, rinse with water
- Avoid breathing dust
- Store all containers in a cool, dry place
- Do not store containers in direct sun light
- Do not store near combustible materials
- Do not mix oxidizers
- Use clean, dry utensils when handling oxidizers
- Keep all oxidizer containers off wet floors

### Conditions and Material to Avoid

- Excessive heat—oxidizers will decompose, releasing toxic gasses and heat
- Solvents
- Acids
- Other pool chemicals such as acids, algaecides, clarifiers, sequestering agents, surface cleaners, etc.
- Organic materials
- *Do not mix chemicals with anything other than pool water. Always add chemicals to plenty of water. Never add water to chemicals.*





# ALGAE

Algae is the most common water problem in swimming pools. Inadequate sanitizer levels, improper water balance and improper filtration can all play a part in the growth of algae. Algae are microscopic plant life that are very tough and resourceful. There are many types of algae, yellow, green, brown, or black; thousands of species of algae exist. Green algae are the most common type and the easiest to get rid of. Green algae can appear in patches or create an all-over cloudy green shade of water. Pink slimy algae are actually not algae but fungus bacteria, often appearing as streaks or spots in corners and crevices. Sometimes it appears as a pink or orange colored ring around the skimmer or waterline. See [Water Mold or Pink Slime](#) for details and treatment. Mustard algae prefer shady areas like pool step corners, along the walls and under the pool lights, ladders or other fixtures. Black algae often appear as dark colored spots on the walls or floor. Temperature, sunlight, pH, sanitizer level and the presence of carbon dioxide, phosphates and nitrates all affect the presence and growth rate of algae. Algae can be introduced into the pool by rain or wind, leaves and organic material, even fill water. In early stages of algae infestation you may notice the water circulation slowing as the filter is removing algae spores, the filter pressure builds and the return flow decreases.

**In all cases it is much easier and better to prevent the growth of algae than to cure it.**

## Prevention

To prevent algae from growing in the first place requires regular pool maintenance, proper circulation and filtration; keeping the pH and free chlorine residual or other sanitizer at the proper level, keeping the pool clean and vacuumed, weekly shocking and adding a maintenance algaecide to help prevent algae growth. While proper sanitizer levels will prevent most algae growth there are some strains that are resistant to chlorine and other sanitizers. That is why we highly recommend an initial dose of Kleen Pool 6 month Algaecide when you start-up your pool for the season. This one-time application will help prevent algae growth all season long. Otherwise it is a good idea to add a weekly dosage of Smart Algaecide or BioGuard Back-Up Algae Inhibitor at a rate of 2 ounces per 10,000 gallons of water.



## Treatment



If your pool does develop algae, the first thing you need to do is test and adjust the water balance (pH and total alkalinity). Then shock the water with the recommended shock treatment, [See Shock and Superchlorinating](#) and add BioGuard Banish.

### Treatment using Algaecide

Algaecides kill algae, working hand in hand with your sanitizer to help control and prevent algae growth.

## Green Algae

1. Remove solar cover and discontinue use during treatment of active algae growth.
2. Check pH and adjust if necessary.
3. Shock pool using BioGuard Burn Out 3, 1 lb. per 10,000 gallons of water. Follow the pre-dissolve directions in [Shock or Superchlorinating](#). **\*\*SoftSwim USERS\*\*** remember you CANNOT use chlorine or non-chlorine (mono persulfate) shock and must always use the SoftSwim C liquid based shock treatment along with SoftSwim A algaecide. See SoftSwim for additional recommendations.

4. Pour Banish algaecide directly into the water near or over the visible algae growth at a rate of 16 oz. per 10,000 gallons of water.
5. Increase filter run time to 24 hours if possible to increase circulation.
6. The following day, brush and vacuum affected areas
7. Check the filter pressure and backwash if necessary.
8. Continue to maintain your sanitizer level at the high side of normal (Free Chlorine of 3.0) during treatment for algae infestation.
9. Continue to brush walls and vacuum, clean filter as necessary and add maintenance algaecide until pool is clear of all signs of visible algae.



## Black Algae

Some types of algae, especially black algae, are very stubborn and require special treatment. Black algae form a protective coating which makes it highly impervious to shock treatments and algaecide. The best treatment for black algae is to scrub the affected areas or spots prior to chemical treatment so the shock and algaecide will have an opportunity to penetrate the algae spores.

1. Remove solar cover and discontinue use during treatment of active algae growth.
2. Vigorously scrub algae spots with a maintenance or algae brush (nylon bristled brushes are recommended for vinyl pools)
3. Check pH and adjust if necessary.
4. Shock pool using BioGuard Burn Out 3, 1 lb. per 10,000 gallons of water. Follow the pre-dissolve directions in [Shock or Superchlorinating](#). **\*\*SoftSwim USERS\*\*** remember you CANNOT use chlorine or non-chlorine (mono persulfate) shock and must always use the SoftSwim C liquid based shock treatment along with SoftSwim A algaecide. See SoftSwim for additional recommendations
5. Pour Banish algaecide directly into the water near or over the visible algae growth at a rate of 16 oz. per 10,000 gallons of water.
6. Increase filter run time to 24 hours if possible to increase circulation.
7. The following day, brush and vacuum affected areas again.
8. Check filter pressure and backwash if necessary.
9. Continue to maintain your sanitizer level at the high side of normal (free chlorine of 3.0) during treatment for algae infestation.
10. Continue to brush walls and vacuum, clean filter as necessary and add maintenance algaecide until pool is clear of all signs of visible algae.
11. After fighting a stubborn algae problem such as black or mustard algae it is recommended that you thoroughly clean your filter media, brushes, vacuum head and hoses. If algae spores remain in any of these areas they can re-infest the pool.

## Mustard Algae

This type of algae brushes off very easily, in fact too easily. It is NOT, however, an easy form of algae to get rid of. When brushing the mustard algae tend to just spread throughout the pool. There are a variety of algaecides made specifically to combat mustard algae- use the type recommended by your pool professional along with aggressively shocking your pool, as mustard algae is resistant to normal chlorine levels.

1. Remove solar cover and discontinue use during treatment of active algae growth.
2. Check pH and adjust if necessary.
3. Vigorously scrub algae spots with a maintenance or algae brush (nylon bristled brushes are recommended for vinyl pools)
4. Pour Banish algaecide directly into the water near or over the visible algae growth at a rate of 16 oz. per 10,000 gallons of water.
5. Shock pool using BioGuard Burn Out 3 at a rate of 1 lb. per 10,000 gallons of water. Follow the pre-dissolve directions in [Shock or Superchlorinating](#).\*\***SoftSwim USERS**\*\* remember you CANNOT use chlorine or non-chlorine (mono persulfate) shock and must always use the SoftSwim C liquid based shock treatment along with SoftSwim A algaecide. See SoftSwim for additional recommendations
6. Increase filter run time to 24 hours if possible to increase circulation.
7. Check filter pressure and backwash if necessary.
8. Continue to maintain your sanitizer level at the high side of normal (free chlorine of 3.0) during treatment for algae infestation.
9. Clean filter as necessary and continue to add a maintenance algaecide until pool is clear of all signs of visible algae.

After fighting a stubborn algae problem such as black or mustard algae it is recommended that you thoroughly clean your filter media, brushes, vacuum head and hoses. If algae spores remain in any of these areas they can re-infest the pool.

Pink Algae- See [Water Mold or Pink Algae](#)



# CLOUDY WATER

Cloudy water can be caused by a number of conditions, check in the following order:

- **Insufficient filtration-** Make sure your filter is clean and functioning properly. Perhaps your filter is due for a more thorough cleaning than backwashing alone will provide. See Filtration for more details on manually or chemically cleaning your filter. Has your pool been circulating a minimum of 12 hours a day, up to 24 hours a day? When you have cloudy water be sure to allow your filter to run continuously, 24 hours a day, until your water clears.
- **Unbalanced Water-** High ph (above 7.8), high Total Alkalinity (above 175), high Calcium Hardness (above 400) are all capable of causing cloudy water. Test your water and enter the results under Water Analysis to determine if you need to make adjustments and balance your water.
- **Low Sanitizer level-** Sanitizers can be consumed rapidly, especially in high heat and heavy bather loads. A low sanitizer residual can also allow for algae growth, which in the early stages can appear as cloudy water. Add a dose of your maintenance sanitizer and shock your pool- Chlorinated pools should add Burn Out 3 or SmartShock at a rate of 1 lb. per 12,000 gallons. SoftSwim treated pools should add SoftSwim C at a rate of 1 gallon per 10,000 gallons of water.

## TREATMENT



After running your clean filter, balancing and shocking your pool water you may still find the need to add a clarifier. PolySheen Blue will help filter out suspended particles that cannot be oxidized. Made of Polyelectrolyte, it attracts small particles together making them large enough to be trapped by the filter. Be sure to read and follow the bottle's instruction label.

In extreme cases of cloudy water your pool dealer may suggest a **Flocculant**. Power Flocc is used as a coagulant and a settling agent for turbid water. It attaches to free floating matter in the water to form larger, heavier-than-water particles, that settle to the bottom of the pool. Read and follow the label directions carefully. After the debris has settled to the bottom, vacuum the pool on the waste or drain cycle (see filtration) to rid the pool of the unwanted matter. This will mean water loss, so carefully consider this option prior to treatment. **Cartridge filter owners should see an Ace representative PRIOR to using this product.**



Remember you can always bring in a pool water sample for a professional water analysis.

## **STAINING AND SCALING**

All water contains some levels of minerals and metals. When the minerals or metals are dissolved and in suspension they are not visible. If they precipitate, or fall out of suspension, staining or scaling can result. Metals such as copper, iron or manganese in sufficient quantities can all cause staining. Prior to treating a stain you must first determine the cause. Algae or bacteria can cause green, black, yellow, brown or pink discoloration. These organic deposits can generally be distinguished from mineral or metal staining by their response to chemical treatments (sanitizer and algicide) and in most cases can be removed with a vigorous brushing (although they may grow back), see [Algae](#) for more information. Leaves, worms and other organic material left in the pool can also cause staining. This type of staining will usually respond to a sanitizer and a follow up stain remover.

Ruling out the above, one can assume that the discoloration, throughout the water or in deposits, is caused by metals or minerals that have oxidized or dissolved and have precipitated (come out of solution). Unbalanced pH, Alkalinity and the addition of sanitizers are all possible causes for such precipitation. High levels of metallic salts such as calcium or magnesium in suspension may cause cloudy water, when they form hard white deposits or crystals on the pool surface it is referred to as scaling. Heavy metals like copper and iron will cause discoloration or when deposited, staining. Green usually indicates copper or iron, red and brown –iron, black or brown -manganese.

See [Specialty Chemicals for Stain Preventatives and Treatments](#). As with all water problems, prevention is preferred to treatment. The best way to prevent staining is to have your pool water tested at Pools & Spas A Go-Go **PRIOR** to the addition of ANY pool chemicals. Often the source water that you use to fill your pool may contain iron or other metals or minerals that are not visible to the naked eye. If a test reveals the presence of metals or we can recommend a treatment method, often consisting of the addition of a sequestering or chelating agents. This chemical helps bind the metals together so they will not precipitate. Some pool water will require regular additions of these chemicals, especially after the addition of make-up water. Have your water professionally tested for metal content at the beginning of every season. Another key in preventing precipitation is to follow the chemical guidelines for adjusting pH and alkalinity, high, rapid fluctuations can cause precipitation. Corrosion of metal equipment components due to unbalanced pH and Alkalinity can also cause dissolved metals to precipitate in the water. If staining or scaling does occur your Pools & Spas A Go-Go professional can recommend a stain and scale remover for treatment.

### **PREVENT STAINING AND SCALING**

- Have your water professionally tested for metals- results should be 0 ppm.  
**\*DO NOT ADD ANY CHEMICALS UNTIL THIS TEST IS PERFORMED\***
- Follow water balance guidelines for pH, Total Alkalinity, TDS and Calcium Hardness. Add pH and Total Alkalinity adjusters following the application directions closely. **DO NOT** add too much chemical or make too rapid of an adjustment in a short period of time or precipitation can result.
- Routine maintenance dosages of a sequestering or chelating agent will help prevent staining and scaling- Strongly recommended in plaster and fiberglass pool finishes.
- Poor filtration or circulation will accelerate metal precipitation.

## **WATER MOLD OR PINK SLIME**

Pink slime or pink algae are actually not algae but a bacteria or fungus, often appearing as streaks or spots in corners and crevices. Sometimes it appears as a pink or orange colored ring around the skimmer or waterline. Water mold may have different appearances. It may appear as raised white spots or as sheet-like growth on the pool's surface. It will have a slippery feel and may appear as different colors. Water mold is caused by the build-up of a slime coating produced by microorganisms on exposed surfaces. These microorganisms are constantly introduced into the environment and will begin to grow when conditions become favorable (that is, low sanitizer, poor house keeping, etc.). The film that is generated as these organisms grow makes them particularly difficult to treat as the slime that results affords the organisms(s) protection from the sanitizer. Water mold is nonpathogenic (does not cause disease) and, like algae, your pool can be sanitized and safe to swim in with water mold present. Also like algae, water mold originates from the environment around your pool. One common way of introducing water mold into a pool is by placing a pool cover on the ground where it comes in contact with soil that contains the mold. When the cover is placed on the pool, the mold is introduced into the pool. It is always best to fold a cover and drape it over a chair or railing. Cold may slow its growth but will not kill water mold.

Regular brushing and vacuuming usually keeps water mold and pink slime from growing in your pool. But there are places in a pool where proper attention is not always given such as behind lights, under ladder treads, nooks and crannies, a dirty filter, etc. Poor circulation is probably the biggest culprit. Water mold likes to grow in "dead spots." These are places that water does not readily circulate to and therefore the water becomes stagnant.

### **TREATMENT**

The best overall treatment for Pink Slime or water mold is to vigorously brush the affected areas, shock the pool and add an algaecide, Banish Algae Killer for chlorinated pools and SoftSwim users should add SoftSwim A & C according to label directions. Vigorously scrub affected areas with a maintenance brush. Brush all surfaces very carefully, including the underside of ladder treads and skimmer faces behind pool lights, etc. Pink slime, in particular, has a gel-like protective coating that resists casual brushing.

1. Remove solar cover and discontinue use during treatment of active algae growth.
2. Check pH and adjust if necessary, to achieve a 7.2 to 7.8 reading.
3. Shock pool (superchlorinate)- see [\*\*Shock or Superchlorination\*\*](#) for details. Chlorinated pools should add Burn Out according to label directions, SoftSwim users add SoftSwim C.
4. Chlorinated pools add Banish- by pouring algaecide directly into the water near or over the visible algae growth. SoftSwim users add SoftSwim A according to label directions.
5. Submerge vacuum head, hose, brush and pole in the pool overnight for the shock and algaecide to disinfect the equipment.
6. Increase filter run time to 24 hours to increase circulation.
7. The following day, brush pool surfaces and vacuum affected areas again.
8. Check filter pressure and backwash if necessary. If your filter pressure is 8-10 psi above starting pressure for a clean filter after it is backwashed or cleaned, your filter should be chemically cleaned. Clean filter as necessary until pool clears.
9. Continue to maintain your sanitizer level at the high side of normal, Free Chlorine of 3.0 and SoftSwim B level of 50 ppm during treatment for algae infestation.

## ***AUTOMATIC CONTROLS***

Today controlling your pool and spa has never been easier with an automated control system. Heating, filtration, and cleaning cycles can be automatically programmed. From inside or outside your home there are a variety of control panels and remote control options that allow you to operate pumps, valves, heaters, salt water sanitization, solar heating systems, pool and landscape lighting, water features and more. These systems are not only convenient- they are cost effective as well, programming your equipment to run at peak efficiency.

To learn more about the operation of your control system, please refer to the link below:

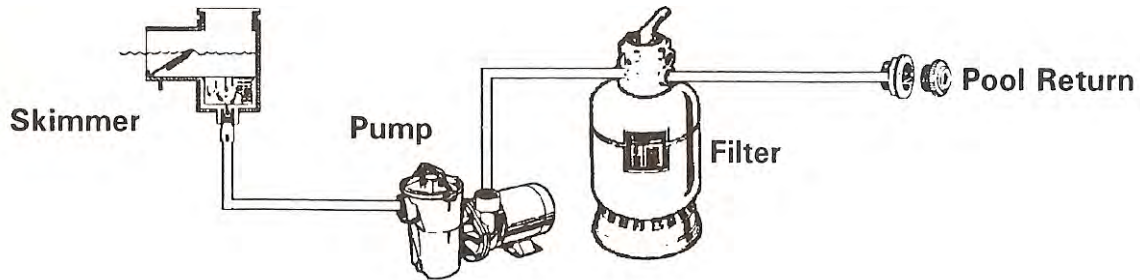
[CLICK HERE TO ACCESS THE OPERATING MANUALS  
FOR YOUR AUTOMATIC CONTROL SYSTEM](#)

SPARCO



# CIRCULATION

Clean, clear, healthy pool water is achieved through proper water chemistry, sanitation and circulation. Circulation occurs as water travels into the skimmer passes through the plumbing to the pump, is filtered and returned via the return inlet of the pool. The pump must be on for the water movement to take place; which should be a run time 10 to 24 hours every day. Moving water allows your sanitizer to work more effectively, helps prevent dirt build-up and algae and allows your filter to effectively remove dirt and debris.



The skimmer body contains a basket for catching leaves and debris before they enter the pump and possibly clog the impeller area. You should check the basket regularly (every few days) and empty as needed. If your basket becomes cracked it should be replaced. There are many styles and sizes of skimmers available, be sure to save yourself an extra trip by bringing your old skimmer basket with you. The skimmer “skims” the water surface by pulling surface debris from the water. Your skimmer will work most effectively when the water level is  $\frac{1}{2}$  to  $\frac{2}{3}$  up the skimmer opening and the weir door is in place. The door floats at the water surface drawing surface water and floating debris into the skimmer. The door simply snaps into place in the skimmer mouth and should at all times move freely to allow unrestricted water flow into the skimmer. Check and maintain your water level often and add make-up water if needed. If the water level drops below the skimmer the pump will draw in air and cavitate, potentially causing serious damage to the pump and motor by allowing it to run dry. Manual vacuuming is performed through the skimmer. Go to [Vacuuming](#) section of the manual for detailed instructions.



After the pool water passes through the filter tank it is returned to the pool via the return inlet fitting. Most return fittings have a directional eyeball fitting to direct the flow of water back into the pool. For best results, the eyeball should be positioned so that the water is forced in a circular motion towards the pool bottom. This will promote more even circulation and result in a cleaner pool.





## PUMP & MOTOR



Your pool water circulates as a result of your pump and motor. Your pump should operate 10-12 hours a day. If you have a 2 speed motor, 24 hours a day on low speed. If you begin to experience a water problem, cloudy water or algae present, run the pump longer and filter the water 24 hours on high speed, if necessary. Optional automatic timers are a convenient way to control run-times.

Your pump has a suction side and a discharge side. The pump housing holds an impeller that pushes water to the discharge side of the pump, where it then flows through the filter for cleaning and then it goes back to the pool through the return fitting.

Most pumps have a lint strainer where the water enters the pump. The pump strainer basket is usually positioned under a clear lid, so you can literally see if it contains any debris. You will have to check the pump basket regularly and clean it out with a hose. The lid on the lint strainer holds an o-ring that must be lubricated with an o-ring lubricant from time to time to ensure a good water tight seal. **DO NOT** use vaseline® on o-rings as the petroleum can break down the rubber. When worn, cracked or stretched the strainer lid o-ring will not seal properly which can allow air into the lines causing pump to not hold prime and air bubbles in return inlet. Inspect the o-ring for wear and replace as needed.

Your pump will have (1) or (2) ¼" drain plug(s) threaded into the lint pot and or pump housing; the drain plug is used to drain water out of the pump for winterizing. If your plugs come with o-rings you should keep them lubricated to keep air from entering the pump and losing prime.

### Priming

Priming your pump (removing air and filling with water) may need to be done manually. Most above ground pumps are not self priming and occasionally inground self priming pumps may still need to be primed. At times the pump will lose its prime if the pump is higher than the water level in the pool, if it has been winterized or after cleaning your pump basket. If you need to prime your pump use the following steps:

- ✓ Check water level in the pool is at the half-way point on the skimmer.
- ✓ Check the skimmer basket –empty if needed.
- ✓ Make sure the drain plugs are installed in the pump.
- ✓ Check that any valves leading to pump are in the open position
- ✓ Remove the lid from the lint strainer at front of pump.
- ✓ Take a garden hose and put it into the pump housing. Fill the pump housing, which should automatically fill the suction line.
- ✓ When water flows out of the pump housing remove the hose.
- ✓ Put the lid back on the pump over the basket area. Check the lid O-ring is in place so that no air gets into the pump housing.
- ✓ Quickly turn “on” the power to the pump.



Watch the lid on the pump and see if the water has started to come in, this should take a minute or less, if after a minute you don't see water and the clear lid is starting to fog up, then turn "off" your pump and repeat the above steps. The motor is what powers the pump to circulate water. The motor is the electrical side of the pump; it is located opposite of the pump housing. Most above ground pump & motors have 110v electrical plugs. They should always be plugged into a GFCI receptacle. You should NOT run the motor off of extension cords as this is an electrical hazard and is also detrimental to the motor itself. Inground Pumps can be 110v or 220v and are generally hard wired. Motors are designed and built for maintenance free operation. In order to keep your motor operating smoothly and extend motor life you should follow these general maintenance guidelines:

- ✓ Keep the area in and around the motor clean. Excessive dirt in the area can be pulled into the motor, resulting in shortened motor life.
- ✓ If the motor is being stored when not in use, be sure that all surfaces are dry to prevent rust. If left outside, the motor should be covered to guard against blowing leaves, dirt, and snow. DO NOT SEAL THE MOTOR IN AIR TIGHT MATERIALS. Condensation may form, causing bearing and insulation damage.
- ✓ Keeping the motor cool is most important. Ambient temperatures should not exceed nameplate markings. Provide shade from direct sunlight. The area around the motor should be large enough to provide ample cross ventilation.

Your pool may be equipped with one or more pump. If your pool uses one pump you will find detailed operating instructions in the owner's manual by clicking on Pump 1. If your pool is equipped with more than one pump model the manual for each model can be accessed below.

*Click on the pump listing below to view the complete operating manual*

[Pool Pump 1](#)

[Pool Pump 2](#)

[Spa Pump](#)



# FILTRATION

Adequate filtration is the one of the most important elements of your pool. Chemicals alone do not keep the pool water clean. It is the combination of chemicals, circulation and filtration that keeps your pool water clean and clear. The importance of proper filtration cannot be overemphasized in the overall program of sound pool maintenance and sanitary water. Proper circulation and filtration of the water is one of the best defenses against algae formation and cloudiness. The filter system comprises the complete filter and pump and motor. The filter is passive and requires the pump and motor to pass water through it for cleaning. There are three basic types of filter systems: Sand, Cartridge (Element) and Diatomaceous Earth (D.E.). Each system has certain advantages as they all differ slightly in operation and the type of medium that actually filters the particles (medium refers to the actual sand, cartridge or D.E. inside of the filter tank). Filter types vary in popularity in different areas of the country. There are certainly pro's and con's to each type, although all of the filters are quite capable of providing excellent results with proper instruction and maintenance.

## CARTRIDGE



## DIATOMACIOUS EARTH (D.E.)



## SAND



Circulation begins as water flows through the in-wall skimmer and main drain (optional) into the pump & motor. It then is pushed into the filter tank where dirt and debris are trapped in the filter medium. Clean water then exits the tank through a return hose or plumbing to the pool through the return inlet(s). Regardless of the type of filter system you have you should operate your system 10 to 12 hours per day. As dirt and debris accumulate within the medium of the filter tank the pressure gauge on the tank will begin to rise and the return flow of water going back



to the pool will simultaneously diminish. When the pressure gauge increases 8 to 10 psi above the normal, clean, starting pressure it is then time to backwash or clean the filter. Refer to the operating instructions for each system type on the pages to follow. Be certain to read and follow all manufacturers' instructions on operation and winterizing, prior to start-up.

The following pages contain specific information on [Cartridge](#), [Diatomaceous Earth](#) and [Sand Filters](#). This is where you will find parts breakdowns, troubleshooting information and operating manuals for your filter system. You can view or print the filter information using the upper toolbar on your screen simply click on file, print. Once you have opened a new screen (for example you have clicked on an operating manual for your Tagelus Sand filter) you can return to the Pool Manual by using the green navigation arrows at the bottom of your screen on the Adobe toolbar. When you want to return to the main menu simply click on the X in the upper right corner to close Adobe Reader and return you to the menu.

# CARTRIDGE FILTERS

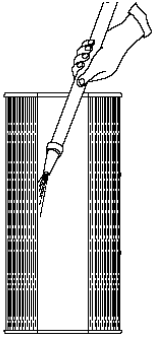


Cartridge filters use one or more pleated elements or cartridges as the filter media to collect dirt and debris. Their unique advantages are minimal maintenance and less water loss than filters requiring backwashing. The cartridge element itself is removed and cleaned, generally every 6 months or 1 to 2 times per season. Cartridge filters utilize the debris they collect as an aid to improve filtration. As a result, cleaning too often does not allow the filter to work at optimum filtration efficiency, while not cleaning often enough will shorten the life of a cartridge element.

When the pressure gauge rises 10 psi above the “normal” or starting reading you should follow the steps below to remove and clean the cartridge element or follow the manufacturer’s instructions provided with your filter. The cartridge elements will generally last 3 years before needing to be replaced (or when cleaning no longer allows adequate flow and reduced pressure).



## General Cleaning Instructions for Cartridge filters



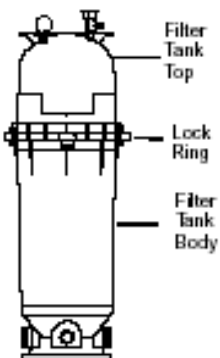
1. Shut off pump & motor.
2. **IMPORTANT** Release pressure in the tank by loosening the air relief bleeder valve.
3. Squeeze tabs on black ring in middle of the filter and unscrew lock ring off of filter.
4. Remove filter top or lid.
5. Remove cartridge element and thoroughly hose element top to bottom holding the nozzle at a 45 degree angle, and wash all the pleats with emphasis between pleats using a high-pressure hose.
6. Replace filter top and secure lock ring.

**Chemical Cleaning-** Periodically you will want to chemically clean the cartridge- follow steps 1-5 above then:

1. Soak the cartridge element in a Filter Cleaner or Tri Sodium Phosphate (1 cup TSP to 5 gallons water) several hours or overnight to provide a thorough cleaning.
2. Rinse cartridge element and replace in tank.
3. **IMPORTANT** Release pressure in the tank by loosening the air relief bleeder valve.
4. Replace filter top and secure lock ring.

## WARNING

**THIS FILTER OPERATES UNDER HIGH PRESSURE. WHEN ANY PART OF THE CIRCULATING SYSTEM (E.G. LOCK RING, PUMP, FILTER, VALVES, ETC.) IS SERVICED, AIR CAN ENTER THE SYSTEM AND BECOME PRESSURIZED. PRESSURIZED AIR CAN CAUSE THE LID TO BLOW OFF WHICH CAN RESULT IN SEVERE INJURY, DEATH, OR PROPERTY DAMAGE. TO AVOID THIS POTENTIAL HAZARD, FOLLOW THESE INSTRUCTIONS.**



1. Before repositioning valves and before beginning the assembly, disassembly, or adjustment of the lock ring or any other service of the circulating system:
  - A. Turn the pump OFF and shut OFF any automatic controls to assure the system is not inadvertently started during the servicing.
  - B. Open air relief valve; and
  - C. Wait until all pressure is relieved- pressure gauge must read zero (0).
2. When installing the filter lock ring, follow the lock ring installation instructions exactly.
3. Once service on the circulating system is complete, follow system restart instructions exactly.
4. Maintain circulation system properly. Replace worn or damaged parts immediately (e.g. lock ring, pressure gauge, relief valve, o-rings, etc).
5. Be sure that the system is properly mounted and positioned according to the instructions provided in the filter system owner’s manual.

*Click on your filter model to view or print the complete owner’s manual*

## **DIATOMACEOUS EARTH (D.E.) FILTERS**

Diatomaceous Earth (DE) is a fossil material ground into a very fine white powder. DE filters contain cloth coated grids. The DE powder coats the internal grid. Water passes through the DE coated grid which strains dirt, algae and some forms of bacteria from the water. DE filters will trap the finest particle of the 3 filter types but this also means that the filter needs to be cleaned more often. When the filter pressure gauge reads 10 psi over the starting pressure the filter should be cleaned of the old DE and dirt that has collected inside of the filter following the instructions below. Adding new DE called "charging" the filter is done on initial start-up and after cleaning. The amount of D.E. used to charge your filter can be found in the chart below.

You may follow the general D.E. filter instructions listed below for start-up of your Star 50 DE filter or Pentair Warrior filter or refer to the complete operating manual

### **D.E. Initial Start-Up Instructions (charging)**

1. Make sure all plumbing connections, clamps and fittings are hand tightened.
2. Open the air relief bleeder valve on the tank to remove all the air out of the system.
3. Turn on pump & motor.
4. When water begins to spray out of the air bleeder valve close the valve.



**REMINDER: ALWAYS** open the air bleeder valve each time you are starting up your system to relieve pressure and rid the system of air.

5. Add the specified amount of D.E. in a pre-mixed slurry into the skimmer.

### **Adding DE (Charging the filter)**



On initial start-up and after backwashing a DE filter, the DE powder will need to be replaced; this should be done within 2 minutes of the filter running. Find the proper amount of DE needed for your filter on the front of the filter tank or in your filter's operating instruction manual (usually 4 to 6 lbs.) The DE powder is measured in pounds or coffee cans. Add the specified amount of D.E. powder into a clean bucket of water and pre-mix

before pouring slowly through the skimmer 1 lb. at a time with the pump running. **DO NOT** allow the system to run longer than 2 minutes without D.E. Mix the required amount of diatomite with sufficient water in a bucket to make a thin, milky mixture. Introduce the slurry of diatomite from the bucket directly into the top of the skimmer. With the pump running and the pool skimmer valve open, pour the mixture directly into the skimmer. The slurry will be drawn into the filter.

#### **Required D.E. to charge Star Clear filter**

MODEL	POUNDS OF D.E.
ST 35	2 - 3
ST 50	3 - 4
ST 80	4 - 5 1/2

#### **Required D.E. to charge Warrior filter**

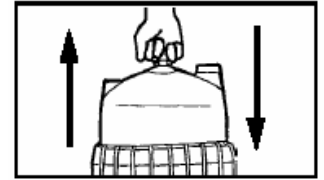
Model No.	Rated GPM	No. of 1 lbs. Coffee Cans	Weight of Diatomite
56344xxx	44	3	1.5 lbs
56366xxx	66	4	2 lbs

**NOTE: 1/2 pound of DE will fill a 13 oz. coffee can**

Once your filter system is charged with D.E. make a note of the pressure gauge reading. This is called your normal starting pressure. When the pressure gauge reads 10 psi over the normal starting pressure you should regenerate or backwash the filter following the instructions on the following pages.

## ABOVE GROUND STAR DE FILTER

**Regeneration (Swish and Bump) \*** *Pentair Star filters use this method*  
As the pressure builds and the flow becomes less, it means that the D.E. powder is becoming saturated with dirt.



1. Turn off the motor.
2. Open the air relief bleeder valve on top of the tank.
3. Move the knob at the top of the filter tank clockwise to bump one stop and then counter clockwise to the other stop. Perform this operation 4 times. This will “swish and bump” the filter allowing the D.E. and dirt to intermix with the water within the filter chamber.
4. Turn the motor back on and then when water starts spraying out of the bleeder all the air will be out of the tank. Close the bleeder. Cleaner D.E. now is exposed on the grids and dirt and debris is at the bottom of the tank.

**At this point the pressure should be lower and the flow greater.**

### Cleaning

After a number of weeks it will be noted that the flow is reduced in about 1 day, after regeneration which means that the ratio of dirt to D.E. is such that a full cleaning is needed.

To clean the filter

1. Turn off the motor.
2. Open the air relief bleeder valve on top of the tank.
3. Quickly “swish and bump” using the filter knob only 4 times.
4. Open the air relief valve on top of the tank and the drain plug at the base of the tank. Wait until the filter is completely empty, replace the drain plug keeping the air bleeder open and stand clear of the filter.
5. Turn the pump on and completely fill the filter with water. Shut off the pump and relieve the internal pressure.
6. “Swish and bump” another 4 times and again allow the filter to drain. Close the drain plug and follow the [D.E. Start-Up instructions](#) from the previous page to begin a new filter cycle.



**NOTE:** At least once a year, disassemble and clean filter regardless of operating pressure readings. Please refer to the filter operating manual below for detailed instructions.



[Click here for your filter operating manual](#)

## Cleaning the Pentair Warrior Filter

As the pressure builds and the flow becomes less, it means that the D.E. powder is becoming saturated with dirt. When the pressure increases 10 psi above the normal starting pressure you should clean the system following the instructions below. If the pool is very dirty or has a lot of algae, the filter may require frequent cleaning, as the D.E. will saturate very quickly.

1. Turn the pump off, shut off any automatic controls to ensure that the system is not inadvertently started during servicing.
2. Open the filter High Flow™ manual air relief valve, (and the waste drain valve, or cap, if your system has one).
3. Remove hair and lint strainer pot lid and clean basket. Replace basket and secure lid.
4. Disconnect air relief drain hose if installed.
5. Remove locking ring by depressing safety latches on both sides of ring and rotate counter clockwise, then remove tank lid.
6. Remove the grid assembly by placing hands in lifting handles and pulling straight up on the element assembly.
7. Remove the knob from the center support rod to disassemble grids.
8. Using a garden hose with a nozzle, direct water spray at the grids to dislodge and wash away accumulated foreign matter.
9. Turn the grids over several times during the washing operation to clean the grids thoroughly.
10. Clean and remove debris from inside the filter tank and from o-ring and o-ring groove on tank body.
11. Reassemble the clean grid assembly and install assembly into the filter tank body, making sure it is fully seated. Align the arrow on the handle frame with inlet port of filter.
12. Replace the tank lid onto the tank body making sure it is fully and firmly seated on the tank body.
13. Place lock ring over tank lid, and centering the lock ring on the threads of the tank body, turn the lock ring clockwise until the safety latches click and the lock ring hits the stops on the body.

**DO NOT ATTEMPT TO OVER-TIGHTEN THE LOCK RING  
AFTER LOCK RING HAS HIT THE STOPS ON THE BODY**

14. Replace drain cap and reinstall air relief valve drain hose if used.
15. Re-charge D.E.

**At this point the pressure should be lower and the flow greater.**

If the pressure should go back up again within a short period of time, it means the grids may need a more thorough chemical cleaning as described below.

### Cleaning the DE filter (chemical cleaning)

If the filter pressure reading remains high AFTER the filter has been cleaned and charged with fresh DE and the pool water is clean and clear you may need to chemically clean the grids inside the tank. A chemical filter cleaning is generally required once to twice a season- and at pool closing time. Please refer to your filter operating manual below for complete details on chemical cleaning. Pools using the SoftSwim program should chemically clean their filters every 4-6 weeks using BioGuard SoftSwim Filter Cleaner.



[Click here for filter operating manual](#)

## SAND FILTERS



Sand is the oldest and most popular method of filtration. Water passes through the pump housing and enters the sand filter through the multiport valve head, which controls the directional flow of the water. As water passes through a bed of filter sand (silica quartz) dirt is trapped in the sand bed and clean, filtered water is returned to the pool. Your sand filter should run 10 to 24 hours a day. When the filter becomes dirty- pressure builds in the sand filter and the water flow returning to your pool decreases. When you initially start your sand filter you will want to make a mental note of the “normal” or “starting pressure”, when your pressure gauge increases 10 psi from that point you should clean the sand by backwashing the filter.

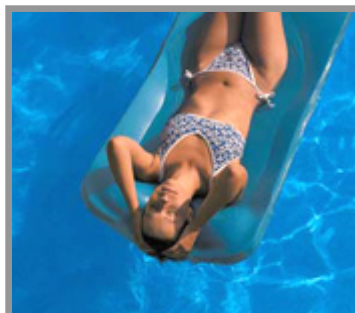


Backwashing involves reversing water flow through the filter and sending dirt through a waste line. A valve on the filter tank will direct the water to control backwashing and other functions. When using a rotary multiport valve on a sand filter be sure to shut off the pump and motor before changing valve positions. The o-ring inside of the valve, tank and pump and motor should be lubricated at least once each season with an o-ring lubricant. **DO NOT** use vaseline® as the petroleum can breakdown the rubber material)

Before attempting to start the filter system for the first time be certain that the water level is at the proper level, a minimum of half way up the skimmer opening, and that the pump is primed; [see pump and motor](#) for details on priming your pump. New filter sand has a fine dust that should be backwashed and rinsed prior to running on normal filtration. The following are GENERAL guidelines for operating your sand filter. Detailed instructions on the operation of your sand filter can be found in your filter operating manual on the following pages.

### START UP

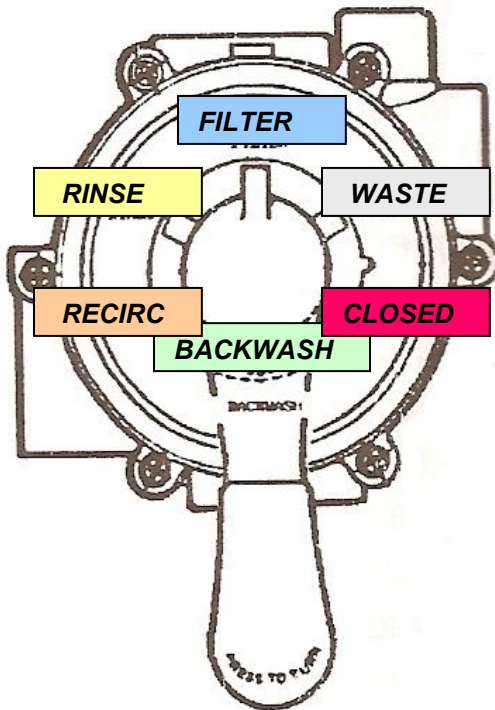
1. Set up the system on its base.
2. After removing the valve, fill the tank approximately halfway with water.
3. Cover the center standpipe and slowly add the specified amount of sand \*see owners instructions. **DO NOT** use play sand- use only swimming pool filter silica sand.
4. Replace valve and seal tank.
5. Connect the hoses from pool and inlet to valve head, use screw clamps to tighten.
6. Turn valve handle to backwash and turn on pump and motor for 30 seconds to 3 minutes, or until water comes out clear. This will flush out system prior to circulating.
7. Stop motor and set valve to rinse. Turn on pump and motor for an additional 30 seconds.
8. Stop motor and set valve to filter. You are now in normal operation.
9. Open air relief bleeder valve and start pump and motor. When water sprays from air relief you can hand tighten.
10. Note the reading on your filter's pressure gauge. This is your normal, clean, starting pressure. You will reference this number when you need to backwash your filter.





Your sand filter is equipped with a 4 position or 6 position multiport valve. The 4 position valve has Filter, Backwash, Recirculate and Waste positions. The 6 position includes these positions and also offers a Rinse and Closed setting- see details on each setting, below. Each multiport valve is equipped with an external air bleeder device. **Always** open this air bleeder and stand clear of filter and valve before starting the system pump and leave open until a steady stream of water is expelled. **CAUTION: To prevent equipment damage and possible injury, always turn pump off before changing valve position.** The valve has a closed position. The pump should never be on when the valve is in the closed position. If the pump is operated with the valve closed, the air relief system becomes inoperative and an explosive situation could exist. Additionally, running the system with no flow will seriously damage the equipment.

## VALVE OPERATION



- 1. FILTER POSITION-** This is the process by which the water from the pool passes through the filter tank and the sand. As the water moves down through the sand, the dirt and debris are trapped by the sand, thus filtering the water.
- 2. BACKWASH POSITION-** This process is used to clean the debris that has accumulated, out of the sand. The water is essentially moving in a reverse fashion. This should not be done for more than one minute at a time, and should be done when the flow of water back to the pool has slowed considerably and the pressure gauge has risen 10 PSI over the original normal starting pressure.
- 3. RINSE POSITION -** This is done after backwashing to settle the sand and cloudy water inside the tank caused by backwashing, so sediment will not pass back into the pool.

- 4. RECIRCULATE POSITION-** Water is passed from the skimmer to the pump and then up to the valve; however, instead of passing through the sand, it passes through the valve head and then back into the pool. Re-circulate is used to circulate chemicals without filtering; this will simply circulate the water throughout the pool.
- 5. WASTE POSITION-** this function is used when one desires to draw water or vacuum debris from the pool directly onto the ground (bypassing the tank). For example, if there is a lot of debris accumulated on the floor of the pool, one would use this process to vacuum it from the pool onto the ground; bypassing the filter tank.
- 6. CLOSED POSITION-** this position is used when one wishes to shut off water flow through the valve. The valve is left in this position for winter closeup, since it shuts off all of the passageways through the valve.

**REMEMBER NEVER CHANGE VALVE POSITIONS WHEN PUMP & MOTOR IS RUNNING**

## BACKWASHING

When the return flow diminishes and your filter pressure gauge reads 10 psi higher than the normal starting pressure it is time to backwash. The actual time between backwashing will vary depending on the amount of dirt in the pool and clarity of the water; on average you may expect to backwash every 10 days to 2 weeks.



When it comes to backwashing, more is NOT better. As dirt accumulates inside of the filter tank it is actually able to filter smaller particles. Backwashing too frequently will decrease your filter's efficiency.

### STEPS TO BACKWASH

1. Turn off pump and motor.
2. Turn valve handle to backwash position.
3. Open backwash gate valve. (optional)
4. Turn on pump and motor for up to 3 minutes, until the water coming out of the tank is clear.
5. Turn off pump and motor.
6. Turn multiport valve to rinse position.
7. Turn on pump and motor for an additional 30 seconds.
8. Turn off pump and motor.
9. Turn multiport valve to filter position.
10. Open air relief bleeder valve.
11. Close backwash gate valve. (optional)
12. Turn on pump and motor.
13. Close air relief bleeder valve.

Sand should be replaced every 1 to 2 seasons. When replacing sand use only swimming pool filter quartz referred to as #20 silica sand. DO NOT use play sand. When replacing sand be careful of the bottom laterals (slotted tubes) at the bottom of the filter tank. Check laterals for cracks and replace if necessary.

**Click on your filter model listed below for a complete owner's manual**

[Pool Filter Manual](#)



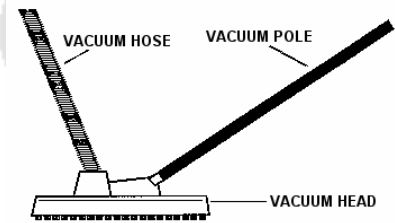
# VACUUMING

To keep your pool clean it will be necessary to vacuum the pool floor to remove dirt and debris. When vacuuming you are using your pool pump with vacuum attached to skimmer to pull dirt and debris from the pool floor to be trapped inside of your filter-returning the water back to the pool. You should vacuum your pool on a regular basis, generally once a week- or as needed. If your looking for a little less maintenance there are a variety of automatic cleaners available today for all pool types and budgets. Your Pools & Spas A Go-Go representative will be happy to recommend a pool cleaner that is right for you.



[Click here to see how to manually vacuum your pool](#)

Your manual vacuum consists of a vacuum head, vacuum hose, telescopic pole and either a vac adaptor (Doughboy skimmer) or skim-vac plate. The Vacuum head attaches to the telescopic pole, the hose slips onto the vacuum head on one end- (if you have a swivel end on your hose attach the swivel cuff end to the vacuum head) the other hose end will slip onto the vac adaptor (doughboy) or the skim-vac.

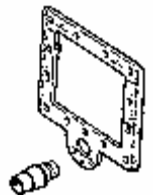


## Before vacuuming you should:

- ✓ Check the water level- should be at least half way up the skimmer opening. A lower water level could cause the pump to loose prime while vacuuming.
- ✓ Check the skimmer basket- empty if needed. The skimmer basket should always remain in place when you vacuum.
- ✓ Check the pump strainer basket-clean if necessary.
- ✓ Check the filter pressure- backwash if necessary.

Doughboy skimmers please follow steps 1-6 below; If you do not have a Doughboy skimmer please see the connection instructions on the following page.

1. Attach the free end (non-swivel end) of the vac hose to the vac adaptor
2. Submerge the vacuum head (already attached to pole and hose).
3. With the filter running hold the free end of hose (with the vac adaptor on it) in front of the return wall fitting to purge the hose of any air and fill with water. When you no longer see any air bubbles coming from the vacuum head the hose is primed.
4. Hold the hose underwater and walk to the skimmer opening.
5. Remove the vac port cover (rubber flap) and insert the vac adaptor into this opening at the bottom of the skimmer mouth.
6. Turn the pump OFF.
7. Put the skimmer lid down into the skimmer directly on top of the skimmer basket.
8. Turn the pump back ON.



You can now go to the ready to vacuum, steps on the following page.

If you do not have a Doughboy skimmer you should connect the vac hose and attachment as follows:

1. Attach the free end (non-swivel end) of the vac hose to the skim vac
2. Submerge the vacuum head (already attached to pole and hose).
3. With the filter running hold the free end of hose (with the skim vac attached) in front of the return wall fitting to purge the hose of any air and fill with water. When you no longer see any air bubbles coming from the vacuum head the hose is primed.
4. Hold the hose underwater and walk to the skimmer opening.
5. Position the skim-vac inside the skimmer, over the skimmer basket. If you are not using a skim-vac you will need to remove the skimmer basket and connect the vacuum hose by inserting the hose into the suction opening of the skimmer.



### **You are ready to vacuum:**

Move the vacuum head slowly and gently to thoroughly clean your pool and not “stir” up debris. It is normal for the pressure reading on your filter’s gauge to drop while vacuuming- as the water flow is being restricted through the vacuum head and hose. You should not, however, notice a decrease in the return flow. If while vacuuming the suction decreases check the strainer baskets (in skimmer and pump) and empty if necessary. If the baskets are clean and suction is still diminished the filter may need cleaned or backwashed- you will notice a decrease in the return flow at this time. When vacuuming large amounts of dirt or debris it may be necessary to clean or backwash during the vacuuming process.

During spring clean up, after an algae problem or heavy dirt/debris you may want to consider vacuuming to waste. If your filter type allows for this option the water being vacuumed from the pool would be discharged through a waste or backwash line out of the pool vs. circulating through the filter. You will lose a considerable amount of water doing this and should first consult Pools & Spas A Go-Go.

If you are experiencing air bubbles coming from the return inlet or low suction (and filter does not require backwashing) you may have an air leak on the suction side.

- ✓ Check the vacuum hose itself for pinholes or cracks that could be sucking air, check the connection at the skim-vac or skimmer- is the hose still submerged
- ✓ Check the pump housing is it filled with water? The strainer lid on the pump housing holds an o-ring that should be checked as well. Lubricate with an o-ring lube from your pool dealer. If o-ring is worn, cracked or stretched replace it. A filter system that is running fine can sometimes show air leaks when the suction is increased during vacuuming.

***To keep your pool looking great, effortlessly, be sure to check out our Automatic Cleaners on the following pages.***

# AUTOMATIC POOL CLEANERS

There are a variety of automatic pool cleaners available today that will keep your pool looking great, while saving you time. Your Pools & Spas A Go-Go professional can recommend the type of cleaner and brand best suited to your pool type and budget. Automatic cleaners not only remove dirt and debris but also improve your pool's circulation. There are four types of automatic cleaners: *Battery Powered Hand Held* cleaners use rechargeable batteries; *Suction Type* use the suction from your pool pump and motor; *Pressure Type* are powered by the return flow from your filter system; *Robotic Type* are self-contained, electric powered cleaners.

**DO NOT** coil the vacuum hose from any automatic cleaner into a circle - store straight. A coiled hose will create a memory that can impede the performance of your automatic cleaner.

You can view complete operating manuals by clicking on the [links](#) below.



**Battery Powered (Self-contained)** These battery-powered, hand held cleaners snap onto any telescopic pole and require no installation or assembly. By using a rechargeable battery and a reusable, easy-to-clean filter bag, they collect leaves, hair, dirt, and even sand; silt and algae which means dirt and debris stay out of your filter.

[AquaBroom manual](#)

[Cattfish manual](#)

[Pool Blaster Max manual](#)

[iVacAquaBroom](#)

[iVacC2](#)

[iVacM3](#)



**SUCTION TYPE** Suction type cleaners attach to your skimmer using the filtration system of your pool, working from the suction side in the same way you attach your manual vacuum. The dirt and debris collected by suction cleaner is drawn into the pool filter. Operating from your existing equipment, these automatic cleaners move effortlessly with no additional costs. They aid in your pool's circulation by dispersing chemicals and water temperatures from bottom to top more efficiently.

[Kreepy Krauly EZ Vac](#)

[Derby Vac](#)

[Dirt Demon IG](#)

**PRESSURE TYPE** (*with and without booster pumps*)



Pressure cleaners are powered by the force of the clean water coming back into your pool through the return inlets. There are two types of pressure style cleaners; those that rely on your filter's return water pressure only, and those that use an independent pump and motor specifically to boost the return water pressure to operate the cleaner. Both styles will have a bag or storage compartment to collect the dirt and debris it collects. These filter bags need to be emptied and cleaned, but will in turn eliminate the debris from entering your filter system. As they clean your pool they enhance circulation by dispersing

the chemicals and filtered water throughout the pool. These cleaners sometimes have long tentacles or whips that sweep interior surfaces of your pool, pushing leaves and debris into the filter bag.

[Polaris 65 ,165 Vac-Sweep](#)

[Polaris Turbo Turtle](#)

[Polaris 180 Vac-Sweep](#)

[Polaris 280 Vac-Sweep](#)

[Polaris 360 Vac-Sweep](#)

[Polaris 380 Vac-Sweep](#)

[Polaris 480 Vac-Sweep](#)

[Polaris 3900 Sport](#)

**ROBOTIC CLEANERS** This category of cleaners operates completely independent of your pool's pump / filtration system and without the cost of installation or booster pumps because robotic cleaners have their own pump motor and reusable filter system built-in. The robot's internal filtration enables reduction of debris entering the main pool filtration system, thus decreasing the amount of debris to the main filter by as much as 80%, saving 1,000's of gallons of water annually. Additionally, robots can scrub your pool clean as it vacuums and filters (so you won't have to) all while saving you money and time. Their powerful circulation capabilities even mix warm, chemically depleted water above, with cooler chemically rich water below to provide more uniform and healthier swimming water for friends and family. The increase in water circulation will also save you money by reducing heater usage and saving energy. To operate, simply plug the compact power supply into a grounded outlet, and the thin, floating power cord into that, and these low voltage (usually just 24v) robots will automatically clean, saving time and money at the touch of a button.

*You can view operating manuals with parts breakdowns by clicking on the [links](#) below. If your make and model is not listed you will need to reference the printed material that came with your cleaner.*

[Polaris 9300](#)

[Polaris9300Xi](#)

[Pool Rover](#)

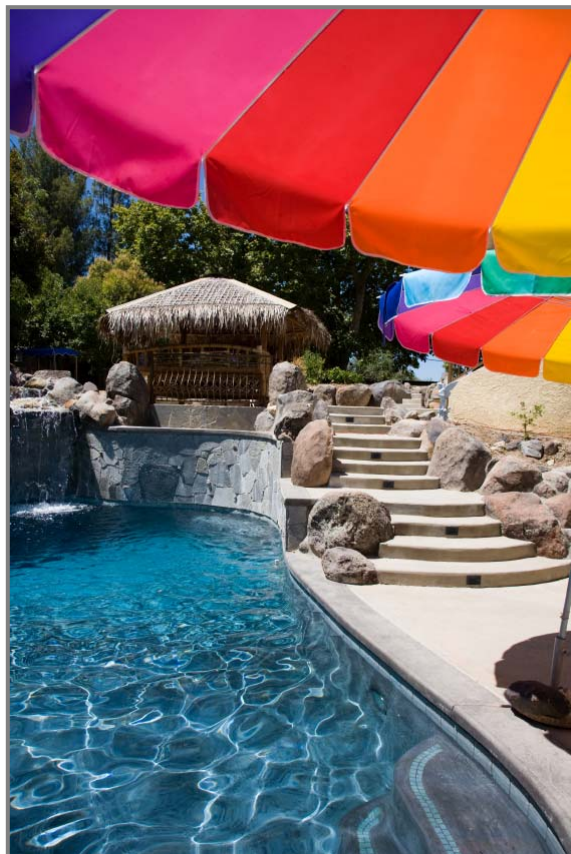
[Cyclone](#)



[Z Junior Industrial](#)

[Z1 Inground](#)

[Z 2 Turbo](#)



## ROUTINE MAINTENANCE



Keeping your pool physically clean is as important as the regular addition of chemicals. Debris in the pool is unsightly, increases sanitizer demand and may cause staining of the pool liner. During the swimming season, thoroughly clean your pool at least once a week. To ensure proper circulation and filtration you should run your system a minimum of 10 hours per day.

1. Maintain proper water level-2/3 up the skimmer opening (you can lose up to 3" of water per week through evaporation, splash outs and back-washing.)
2. Skim pool surface with leaf skimmer as needed.
3. Brush walls and floor with proper brush weekly, this will reduce your vacuuming time.
4. Remove dirt ring from waterline with tile and vinyl cleaner weekly.
5. Clean out skimmer basket.
6. Clean out hair and lint basket at pump.
7. Check filter pressure and backwash as needed- when pressure gauge raises 10 psi above the normal starting pressure. *See your filter operating manual .*
8. Keep deck area clean near pool.
9. Check hoses and equipment and replace when needed.
10. Vacuum pool weekly or as needed. [See Vacuuming](#) for complete instructions.
11. Test your pool water using your test strips 2-3 times per week and follow a regular chemical treatment program.



# VINYL LINER CARE & MAINTENANCE



1. Always maintain your swimming pool water at the proper levels:
  - pH between 7.2-7.8
  - Total alkalinity 125-150 ppm
  - Calcium Hardness approximately 200-300 ppm, *300-500 when using Simple Blue*
  - Free chlorine residual between 1.0-3.0 ppm, *0.5-1.5 when on FROG system*
2. Do not let the pH of the water drop below 7.2. A low pH level can cause the liner to form wrinkles. Maintaining a proper Total Alkalinity level will help stabilize your pH reading.
3. You should avoid using hydrochloric (muriatic) acid to adjust pH or Total Alkalinity. Use BioGuard's Lo N Slo unless an extreme Total Alkalinity would require a muriatic acid to be recommended by Pools & Spas A Go-Go, in which case you would need to follow recommendations closely to avoid damage to pool liner.
4. Have your water tested by Pools & Spas A Go-Go for the presence of dissolved metals or excess minerals that may be present from your water source. **ALWAYS** have your water tested **PRIOR** to adding chemicals as any dissolved metals in the water can cause staining of the walls and bottom of your pool liner when combined with chemicals.
5. Always follow exact manufacturer's recommendations when adding chemicals to your pool. If directions require diluting or dissolving a chemical be certain that you follow these directions. Concentrated chemicals near the waterline or pool floor can cause bleaching of the color or pattern and or damage to the liner. Don't mix chemicals together or add into the pool at the same time. Combinations of chemicals that alone would not have an affect on your liner can be detrimental when combined. Water should be circulating when chemicals are added (unless otherwise directed).
6. When closing your pool for the season always let the water circulate for several hours (follow closing chemical directions) after the final addition of chemicals before shutting down the system. Even liquid chlorine can become concentrated in the water at the deep end of your pool and this can cause bleaching of the liner's color.
7. Be sure all organic debris (leaves, worms, etc) are removed from pool bottom prior to closing to prevent staining of the liner. Always close your pool with a properly sized winter pool cover that fits tightly around the entire edge of the pool to prevent the accumulation of debris that can cause staining. **DO NOT** use cinder blocks or other sharp edged, heavy materials to hold down winter cover- use only water tubes or an anchored safety cover.
8. Do NOT use abrasive cleaners or cleaning tools such as scouring powders, steel wool pads or sharp bristled brushes on your liner. Use only a recommended tile and vinyl cleaner to clean the water line.
9. **DO NOT** drain your pool (other than directed for winter closing). Your pool should remain filled with water at all times.
10. If you have a small section of beaded liner that pulls out of the receiver track you may re-install by pouring very hot water over the liner to make the vinyl supple enough to pull up and snap into the liner bead receiver track.
11. **TIP:** It's a good idea to always leave your vacuum head or maintenance brush attached to your vacuum pole. A pole with an open end (nothing attached) can cause a puncture or damage to the liner if it ends up in the pool.



12. In the unlikely event that you would get a small hole or tear in your liner it can easily be repaired with a patch kit from Pools & Spas A Go-Go. Simply clean the area around the hole with a pool brush then cut a circular patch of vinyl material, apply adhesive and fold over. Once underneath the water, quickly unfold the patch and place it over the hole. Apply pressure to the patch for 1 to 2 minutes and the vinyl patch will bond to the vinyl liner creating a water tight seal.



## HEATING YOUR POOL

Your pool won't contribute to your health or pleasure unless it's warm enough to swim in comfortably when you want to swim. Heating your pool will enable you to get the maximum value out of your investment by allowing you to enjoy the most comfortable water temperatures possible, allowing you to use your pool more often.



How warm you keep your pool is, of course, entirely up to you. Competitive swimmers prefer a temperature of 78° F while recreational swimmers are generally more comfortable near 80°F, the young and elderly closer to 82°F. The sun alone usually can't keep your pool water at that comfort minimum of 78°F. By having a heater to warm your water you can add substantially to the daily use of your pool and extend your swimming season.

There are several methods available to heat your pool, from the sun itself to: gas, oil and electric fired heaters, electric heat pumps and solar heating systems. Your pool professional will help you select the heating system that best suits your budget, geographic region and lifestyle. To learn more about the heating system used on your pool, click on the link below for the complete owner's manual. Remember, operating costs can be kept to a minimum by installing an efficient, properly sized heater or heat pump; using a good quality solar pool cover; and, of course, keeping your filter clean and your heating and filtering system well maintained.

**The following tips will help you conserve energy and heat your pool more economically.**

1. Keep a thermometer in your pool. It will pinpoint accurately the temperature most comfortable for you.
2. Keep your thermostat at the lowest comfortable setting. Each degree more heat than needed could add more to your monthly fuel cost and use up more energy than necessary.
3. Mark the "comfort setting" on the thermostat dial. This will prevent accidental or careless over-heating and waste of energy.
4. Lower thermostat to 70°F when pool is not going to be used for three or four days. For longer periods, shut the heater off. You will save money on fuel consumption and help conserve energy.
5. Protect your pool from wind. Wind above 3 to 5 miles per hour can lower the pool temperature substantially. A hedge, cabana or decorative fence can be an effective windbreak.
6. Use a solar pool cover when pool is not in use. This can reduce heat loss by as much as 50%. If you are vacationing for a couple of weeks or shutting down for winter, turn the heater off completely.
7. Drain heater or heat pump completely prior to freezing weather. Freezing water inside the heat exchanger can result in costly repairs. *Read owner's manual thoroughly.*
8. Get a maintenance checkup annually. It's your best ounce of prevention. Call our service department for more details. The cost is minimal and the service will keep your heater or heat pump working efficiently for many years.

## **POOL HEATERS**

A typical gas heater is constructed of a metal cabinet enclosing a burner assembly, heat exchanger and assorted control valves, safety valves, temperature control and vent stack. The incoming water is heated by the open flame and returns to the pool after the heat has been transferred.

Your Ace professional can assist you in choosing the type of heater and model size best suited to your needs. Regardless of the heater style you choose you will definitely want to read and follow the recommendations listed below, as well as the energy tips on the previous page:

**PROPER WATER CHEMISTRY-** This is critical to the maintenance and overall life of any pool heater. The copper heat exchanger inside of most heaters can corrode quickly if the pH, Total Alkalinity or Calcium Hardness levels are not in balance.

**PROPER USE OF CHEMICALS-** Just as the water balance can affect the internal heater components, improper chemical use can as well. Read and follow all label directions, particularly when using acids or oxidizers that can adversely affect the heater.

**PROPER WINTERIZATION-** Be sure to read and follow the operating manual instructions for draining and winterizing the heater. Water left in the unit can cause freeze damage.

**SAFETY FIRST-** Realize that gas can be dangerous. Follow all of the safety precautions outlined in your operating manual. Gas and electric lines to heaters should be installed by professional plumbers and electricians following local and national codes. **WARNING:** **IF YOU SMELL GAS OR SUSPECT A GAS LEAK:** Immediately clear the area and call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions. If you cannot reach your gas supplier, call the fire department.

**DO NOT** try to light any appliance.

**DO NOT** touch any electrical switch.

**DO NOT** use any phone in your building.

If you suspect a problem with your heater, don't take chances by trying to fix it yourself, call our service department or the local gas company.

**TROUBLESHOOTING-** If you are experiencing problems with the operation of your heater, you can try following the troubleshooting steps listed below. If unsuccessful, stop and call our service department.

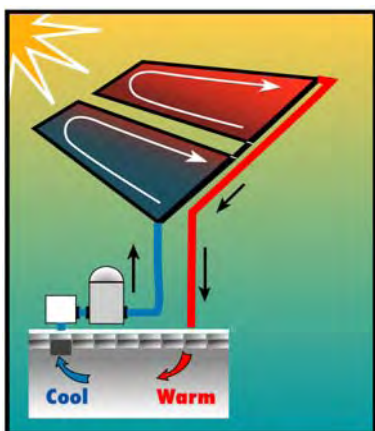
- ✓ Check that the heater and pump are both turned on.
- ✓ Check the thermostat and make sure it is set correctly.
- ✓ Check that the strainer baskets and filter are clean. Heaters have a pressure switch for safety that will not allow them to operate without the proper water flow.

*Click below to view or print a complete manufacturer's operating manual and parts breakdown*

[Pool Heater Manual](#)

[Spa Heater Manual](#)

## SOLAR HEATING SYSTEMS



A Sunheater™ solar pool heating system will raise the temperature of your pool water by up to 10° F (6° C). or more. It is lightweight, durable and easy to install. Water simply flows through the SunHeater's many tubes via your existing pool pump where it is heated by the sun and returned to your pool (see accompanying illustration). The system can be installed on the roof of your house, shed or cabana, mounted to a rack (optional mounting kit SK43 available), or simply placed on the ground. Get the system used by hundreds of thousands of Americans – the SunHeater™ solar pool heating system – and save money on fuel and electricity bills, extend your swimming season by weeks, and get more enjoyment from your pool than ever before. Systems are available to suit all sizes of aboveground and inground pools. Your

SPARCO dealer will help you find the model best suited for your pool.

Using your existing pool pump, water circulates through the solar collectors, is heated by the sun and returned to the pool through the existing fitting.



*Click on your Sunheater solar heating model listed below for a complete operating manual*



[SUNHEATER™ S220 Above Ground Pool System](#)

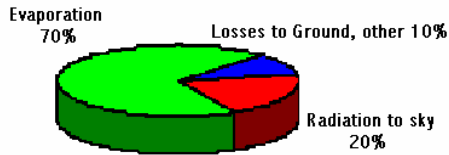
[SUNHEATER™ S420, S411 Above Ground Pool System](#)



[SUNHEATER™ S601 Inground Pool System](#)

# SOLAR COVERS AND REEL SYSTEMS

## Understanding Pool Energy Loss



For a variety of reasons, the single biggest energy conservation move that you can make is to put a cover on the pool or spa. First, the cover reduces the heating bills by preventing heat loss. The cover can also reduce the amount of dirt and grime that enters the pool, reducing the amount of time it takes to remove them from the water through filtration or vacuuming.

A solar cover goes one step further, collecting heat from the sun, which in turn heats the water. In addition, the cover will save on the amount of chemicals and water that need to be added. Covers can also reduce evaporation, which can waste both water and heat and increase the Total Dissolved Solids levels in the water. Some estimates say that as much as 50 gallons a day can be lost in an uncovered pool from evaporation; that's more than 18,000 gallons of water wasted each year.

Though solar pool covers are not a necessity, they are highly recommended in preserving energy and making your pool more pleasant to swim in. Please note the following tips when using your solar cover:

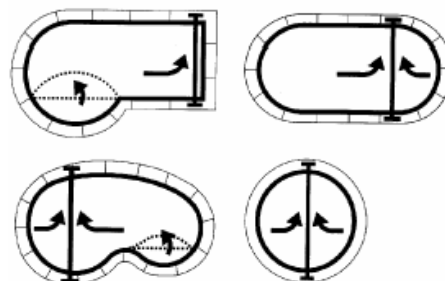
- ✓ **CAUTION:** Solar covers can pose a drowning hazard to children or pets who may try to walk across the cover. ALWAYS keep an eye on children around the pool and warn them that the cover will NOT support them and that they should not try to play on or around the pool. **DO NOT** swim with the cover on.
- ✓ Covers should float on the surface of the water- bubble side down.
- ✓ DO NOT remove your cover and lay it on the lawn. The intense UV rays of the sun will burn-out the grass very quickly.
- ✓ Leave your solar cover off immediately after shocking your pool and during treatment for visible algae or cloudy water. This will help promote the circulation and water quality of the pool as well as extend the life of your solar cover.
- ✓ When solar cover has been removed and is reeled onto a solar reel- it should be covered with the protective white plastic supplied with cover, to protect the coiled cover from gathering heat in the sun and possibly sticking together.
- ✓ DO NOT leave your pool covered for 3 to 4 days or more without removing the cover from time to time to promote circulation and reduce algae growth. This includes vacation time- leave your cover OFF while away.



Solar reel systems are available for all styles of pools; above ground, inground and custom shapes. This illustration below shows how a solar reel can be placed on various pool shapes.



SOLAR COVER REEL SYSTEM  
PLACEMENT ON YOUR POOL



## POOL OPENING

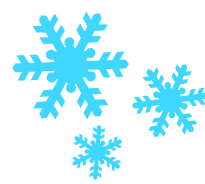
If your pool has been properly closed, and is opened early in the spring, you will find pool opening to be a fairly easy procedure. We recommend that you open your pool in April, before water temperatures increase and promote algae growth. Opening your pool early will also ensure that your pool is clean, balanced and ready for swimming as soon as weather permits.

### Steps to opening your pool:

1. Remove standing water and debris from winter cover. For water removal use a cover pump or siphon. **NOTE:** if you notice the water level in the pool is dropping as you are draining water from atop the cover there may be pinholes in your cover allowing pool water to seep through- if so, stop pumping water.
2. While the cover is draining, start filling the pool to proper level- ½ to 2/3 up on the skimmer opening.
3. After the cover has been drained, carefully remove it from the pool. This step is normally a job for a couple of people. It is important that you keep the edges of the cover from dropping into the pool or any dirt or debris will flow right into your clean pool.
4. Remove any winter plugs, closing plates or freeze protectors from skimmer or return inlets. Install skimmer basket and directional “eyeballs” in inlets.
5. Use a leaf net or leaf bagger to remove leaves and debris from water and floor.
6. Connect all hoses, pump and motor and filter system. See your [Filter](#) owner's manual that came with your pool for complete instructions on hooking up your filter system- clean or replace filter media if necessary. Make sure all drain plugs have been reinstalled in pump and motor, filter, chlorinator, etc. Lubricate all o-rings (pump strainer lid, filter, valves, unions, chlorinator lid, etc) with an o-ring lubricant and replace any that are worn, cracked or stretched. Be sure all equipment is in good working order. Prime pump and start circulation/filtration.
7. Vacuum the pool (a thorough manual vacuuming is usually recommended- [Vacuuming](#)) If there is a lot of fine debris or sediment covering the floor you may want to vacuum to waste if this is an option on your filter system (see your filter manual).
8. Prior to adding any chemicals you should have your water tested by Pools & Spas A Go-Go, especially if you suspect metals or minerals may be present in your pool. You must treat metals in the water **prior** to adding any chemicals to the pool.
9. Re-install all equipment and accessories. Check ladder for any signs of looseness or corrosion. Tighten all hardware replace any necessary fittings.
10. Once removed clean the winter cover with BloGuard's Stow Away to prevent mildew and deterioration, fold it up and store away. **DO NOT** lay the cover out in yard to dry, it will burn and kill the grass in a very short time. It is best to store the cover in a location where rodents cannot gain access to it.
11. Bring a water sample into your nearest Pools & Spas A Go-Go location for a complete water analysis **PRIOR** to the addition of any chemicals.



# POOL CLOSING - WINTERIZING



A properly closed pool is a pool that will survive the winter months without freeze damage and will be easy to open come spring. The cleaner the pool is when you close it, the less work you will have at the start of the next season.



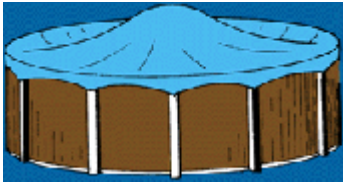
When you are ready to close your pool for the season you will want to first be sure that the water is **CLEAN AND BALANCED**.

1. We recommend that you bring a water sample to Pools & Spas A Go-Go for a complete water analysis before winterization and make any necessary adjustments. Be sure that the pH reads between 7.2 –7.8 and the Total Alkalinity between 125-175 ppm **prior** to adding closing chemicals.
2. Brush and Vacuum the pool and remove any fallen leaves or debris. Leaves left in the pool over the winter months can cause staining to the pool liner.
3. Add winterizing chemicals as per the instructions for your brand specific chemical program. You may need to circulate the pool water for several hours when adding chemicals- prior to pool closing. If your pool does not have a sanitizer level present (Free chlorine of 1-3 ppm, Simple Blue Oxidizer 1.0 ppm, SoftSwim 30-50 ppm), it must be added in addition to winterizing chemicals.
4. You must protect your skimmer by one of two methods:
  - a) Install a press-in Skimmer Plug.
  - b) Install a freeze protector- such as a Gizzmo® to absorb expansion and contraction.
5. Unthread the directional eyeball fitting from the return inlet and hand tighten the threaded plastic cap into the return.
6. Remove ladder and drain thoroughly.
7. The use of an air pillow placed underneath the winter cover is recommended to extend the life of the winter cover. Use a compressor, pump or hand held blow dryer to fill the air pillow  $\frac{3}{4}$  full. **DO NOT** over inflate or fully inflate air freeze pillow. You may also want to place a piece of duct tape over the air cap to help keep securely closed throughout the winter. Tie the pillow using rope into the center of the swimming pool.
8. Place the winter cover over the pool so that the cover is centered with an equal amount of over hang around the perimeter of the pool. Secure the cover by lacing the cable through the grommets and then tightening the winch. **DO NOT** hang water filled gallon jugs from the cover's grommets. The weight will destroy the cover and voids the manufacturer's warranty. When securing cover with cable, cord or other mounting device, make sure the cable, cord, etc. is positioned over the top of the Thru-the-Wall skimmer and **NOT UNDER THE SKIMMER**.
9. You may want to consider using cover clips to prevent wind from getting under the cover at the grommets and lifting the cover. These clips slip over the cover and the top rail.
10. Your cover should rest on the surface of the water. Allow an accumulation of 1 to 2 inches of water on top of the cover to prevent it from flapping or dislodging during high winds. If ice forms on cover, do not tamper with ice or attempt to remove. Leave ice until it melts. Before removing cover in the spring be sure to siphon off all excess water resting on pool cover.



**IMPORTANT:** Monitor the pool throughout the winter and If you feel that the cable that attaches the cover to the pool is too tight and is pulling up on the pool ledges, or is creating excessive weight on the pool, release the cable to prevent damage to the pool.

### RIGHT



The cover should lie on the surface of the pool water. Leave slack, do not pull tight.

### WRONG



Do not install the cover this tight. The weight of snow or rain will damage the cover at the seams and along the pool edges.

11. During the course of the winter you should regulate the amount of water that accumulates on the cover. **DO NOT** allow more than 2 or 3 inches of water to remain, as this will put undue stress on the cover and cables. Use a siphon or cover pump to remove excess water.



12. Now that the skimmer and return inlets have been sealed off you can disconnect the hoses at those fittings and store indoors. If your pool is plumbed with PVC pipe you need to completely drain the plumbing of water to prevent freeze damage.

13. Drain all equipment: pump, filter and heater, automatic chemical feeder, by removing the drain plugs and emptying all water (store drain plugs in pump basket). We recommend storing filter & pump indoors. Refer to the [filter](#) operating instructions and [pump](#) instructions found within this manual for more detailed winterizing instructions. **WARNING:** Failure to properly drain your equipment may result in freeze damage that is NOT covered under warranty.



**PLEASE NOTE:** An improperly winterized pool can be severely damaged by ice. If you are unsure of any of the steps outlined above, please contact Pools & Spas A Go-Go. We will be happy to review these procedures and answer any questions you have about winterizing your pool. Pools & Spas A Go-Go as well as the pool and equipment manufacturers assumes no liability for improperly winterized pool/equipment. Please thoroughly review the complete operating manuals for each piece of equipment; located within this manual.



# SWIMMING POOL SAFETY

**Safety is the most important factor to consider when using or caring for your pool.**

Please read all of the pages contained within this section, and make a habit of practicing basic safety in the use and care of your pool and equipment. Also, read your equipment owner's manuals carefully. When you see blue underlined text you can click to open up more information on that particular topic. In this section, we will discuss four main subgroups of safety:

## [Chemical Safety](#)

## [Water Safety](#)

## [Electrical Safety](#)

## [Equipment Safety](#)

The following **GENERAL SAFETY RECOMMENDATIONS** are supplied by the CPSC and the APSP and provide an overview of the various safety aspects mentioned above. Remember you do not know which pool safety step can save a life!

- Set pool rules and stick by them.
- Never dive in an above ground pool or shallow water.
- Nine out of ten diving injuries occur in six feet of water or less.
- Post depth markers to accurately identify the pool depth.
- Keep these basic safety items by the pool at all times:
  1. Shepherd's crook or long-handled hook
  2. Life ring preserver-coast guard approved
  3. First aid kit including written instructions on how to administer CPR
- Never leave children unattended or even out of eye contact in your swimming pool.
- Make sure pool is inaccessible to children when unsupervised or you are away from home.
- Don't leave toys around the pool or in the water. They could encourage an unsupervised child to enter the pool area.
- Follow instructions for assembly and use of a ladder.
  - Locate the ladder on a solid base
  - Face the ladder when climbing
  - Use the hand grips
  - One person on the ladder at a time
  - No running or pushing on the ladder
  - Swing-up ladders should be raised when leaving the pool unattended—even for a moment.
- Make sure you are aware of local requirements concerning fencing around pools.
- It is a good idea for all family members to become familiar with CPR (Cardio-Pulmonary Resuscitation). Training is normally available from a number of different groups, i.e., American Red Cross & YMCA.
- In case of emergency, call 911 immediately. It is a good idea to have a cordless phone available in the pool vicinity. Keep the following emergency phone numbers posted near the pool:
  - Police/Fire/Rescue
  - Poison control
  - Physician
  - Ambulance/Hospital
- Be aware and prepared for unsafe weather conditions. All swimmers should leave the water immediately as soon as you see or hear a storm to prevent possible electrical shock.
- Keep all chemicals sealed and out of children's reach. Always follow all directions on label.
- Never mix chemicals together.
- Always add chemicals to water, never the reverse.



[Water Safety Video](#)



- Chemicals should be stored in a cool, dry place.
- After handling chemicals, clean hands thoroughly.
- Never put a quick dissolving chlorine tablet or granular chlorine into an automatic chlorinator or floating dispenser.
- Pool alarms are recommended for families with small children or pets.
- Many serious pool accidents involve alcohol. Remember alcohol and pools don't mix!
- Glass and Sharp objects should not be used on or around the deck of the pool.
- All electrical equipment (including power supply cords) used with or around the swimming pool should be protected by a ground-fault circuit interrupter (GFI) at the power source. Your licensed electrical contractor always supplies this circuit. Serious injury and even death can result from improper electrical hook-up.

[CLICK ON AN IMAGE BELOW TO OPEN THE COMPLETE DOCUMENT](#)



## **Chemical Safety**

When opening your pool or doing routine maintenance, remember to follow common-sense rules for safety. Using pool care products can be dangerous if you forget the right handling and storage procedures. Click here for more information on [Chemical Safety-Storage and Handling](#). All chemicals used for any purpose in or around the pool should be handled very carefully, stored in a safe place, and precautions noted. Chlorine and other pool sanitizers are classified as oxidizers. These chemicals require specific precautions, see [oxidizers](#). Some pool chemicals, specifically balancing chemicals, are classified as acids and also require specific handling and usage instructions, see [acids](#).

## **Water Safety**

Pools are a great asset to any home or community, however, rules must be set and enforced, manuals must be read and re-read, and knowledge of proper water safety is key to avoiding preventable accidents. Every parent should teach his or her child(ren) to swim at an early age. You can contact one of the following organizations on-line to locate a certified water safety instructor in your area: [www.ymca.net](http://www.ymca.net) or [www.swimamerica.org](http://www.swimamerica.org) With a few precautions, the likelihood of a drowning incident may be significantly diminished. Please click below to view the following safety pamphlets related to drowning prevention: [Children aren't waterproof](#)

## Layers Of Protection

Your pool provides your family the opportunity to enjoy healthy recreational activity together, as well as the means to teach your children a lifelong respect for water. As a responsible adult, you are aware of the risk of a child drowning when around any body of water, including pools. While it is a fact that adult supervision is the primary solution to childhood drowning, it is also a fact that most of these accidents occur when there has been a lapse in that supervision. Studies have shown in the majority of cases it is during these short lapses in supervision that children have gained access to the pool are through:



- ✓ **Open or unlocked house doors or windows,**
- ✓ **Open, unlocked or broken fence gates.**

Several suggested alternatives or options have come forward to provide a layering effect between the house and the pool. These options are to be used only in conjunction with proper supervision. **In no instance**, are they to be used in place of supervision. In discussing pool safety alternatives, Association of Pool & Spa Professionals (APSP), believes that certain requirements should be met at an absolute minimum. These are as follows:

- All pools should be enclosed by a barrier.
- When the house is used as one side of the barrier, all windows should have a latching device and all doors should be self-closing and self-latching with the latch located at least 56" from the floor.
- All fence gates should be self-closing and self-latching and capable of being locked when the pool is not supervised.

The suggested recommendations are in logical progression from the house to the pool. The APSP recommends that you not rely on any one system, rather several together providing layers of protection. Please pay particular attention to any sliding glass doors which provide access to the pool. These doors may often be left open, requiring layers of safety.

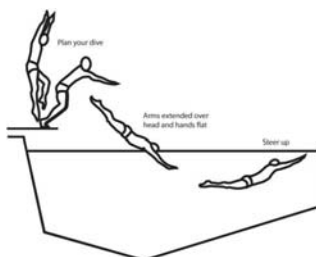
## Diving

**Under NO CIRCUMSTANCES should diving or jumping occur in an above ground pool!**



In an inground pool the pool area must be examined (depth & obstacles) and a diving technique should be discussed to ensure a safe and fun dive. To learn more please visit the [www.divingboardsafety.net](http://www.divingboardsafety.net) website or click below to watch the safe diving video and to review the APSP safe diving instructions.

[Click here for Safe Diving Tips](#)



[Click to watch Safe Diving Video](#)



## Entrapment

Entrapment occurs when a swimmers' hair or body parts are sucked into or held down by a strong vacuum through a suction fitting or main drain. Be certain that all swimmers know to **STAY AWAY FROM** the main drain and suction fittings, especially in spas and shallow pools. Regularly inspect the skimmer lids, and main drain covers to be sure they are securely screwed in place without sign of cracking or deterioration. If a broken or missing grate or drain cover is detected, the pool should not be used until the hazard is fixed. It is a good idea to have an emergency shut-off switch for the pool pump in an easily accessible area near the pool. Anyone using the pool should know where it is and how to use it in the event of an emergency.

[Click here to learn more](#)

## Electrical Safety

GFCI - All electrical equipment (including power supply cords) used with or around the swimming pool should be protected by a ground-fault circuit interrupter (GFI) to protect from possible shock. Your licensed electrical contractor always supplies this circuit. Serious injury and even death can result from improper electrical hook-up. The GFI is located in either the junction box that connects the pool light to the electrical system or in the main load center for the pool (breaker box). The GFI consists of a reset button and a small square button marked "test". To test the effectiveness of the GFI first press the "test" button, it should trip. Next, depress the "reset" button. You should hear a clicking sound. This tells you that the shock protection is intact. Perform this test once a month to be sure your GFI is in working order.

Codes- All electrical equipment and wiring must meet the requirements of the local and national codes which apply.

Grounding and Bonding- All electrical equipment must be grounded. All metal objects (ladders, diving platforms, etc.) must be electrically bonded together.

Extension cords- Never use extension cords around a pool or spa. If they get wet, it's an invitation to a shock - possibly a fatal one.

For additional information read the document [Don't Swim With Shocks-click here](#)

## Equipment Safety

Always read the complete owner's manual for all equipment and be certain you have a good understanding of its operation prior to start-up. Compressed air can become trapped within your pump and filter system creating a dangerous amount of pressure- enough to actually blow the lids off of filters or strainers. The manufacturer's owner's manual for your filter system and pump will explain how to safely bleed the air out of your system. **NEVER** start your system without opening the air bleeder valves first. Below is a safety checklist you should routinely perform to be sure your pool and equipment are operating safely and efficiently.

- Main Drain cover is installed correctly, screwed down, unbroken, and certified for that application.
- All skimmer covers are in place, screw-fastened and unbroken.
- Filter pressure gauge is in good working condition and that the filter pressure is within the operating range specified in your filter owner's manual.
- Filter o-rings are sealing properly and in good condition.
- Filter Tank Clamps and Bolts in place, in good physical condition, and correctly tightened. (Don't try to adjust clamps while the filter is under pressure.)
- ALWAYS Bleed off accumulated air from the system.

## Avoid Drain Entrapments

**Hair entanglement:** hair can get caught in a faulty or broken drain cover

**Limbs:** arms, legs and fingers can become lodged in a suction opening

**Body:** any body part that can cover a drain can be held down by suction

**Evisceration:** sitting on a broken or uncovered drain can cause injuries or disembowelment

**Mechanical:** jewelry or bathing suits can become entangled in a drain cover

A pool or spa with a broken, loose or missing drain cover should be closed immediately until repairs are made by a licensed professional. If you see a broken or loose drain cover, immediately notify a lifeguard and the pool/spa manager. Ensure all pools and spas used by your family have compliant drain covers and other anti-entrapment safety devices, as needed.

- Skimmer baskets and the pump strainer basket empty and free of debris.
- Remove any debris or obstructions from the main drain cover.
- Remove obstructions and combustibles from around the pump motor air vents.
- All chemicals are properly stored ([see chemical safety storage and handling](#)).
- Pool heater is functioning properly, with no smell of gas around the heater.
- Make sure that all grounding and bonding wires are connected and in good condition.
- Make sure that all wiring connections are tight and clean and that all wiring and electrical equipment are in good condition.
- If equipment is indoors the area should be clear of leaves, debris, and combustibles.

The topic of safety cannot be stressed enough. Adult supervision (knowledgeable swimmer and CPR certified) around the pool is highly recommended. It is also wise to use multiple safeguards or Layers of Protection, mentioned below. As a pool owner it is your responsibility to make your pool environment as safe as possible.

Warning signs or notices supplied by your pool dealer must be applied or posted where they are visible to pool users. Please visit [www.poolsafely.gov](http://www.poolsafely.gov) to learn more about water safety.

Please ask the adults and children that will be using your pool to take a brief water safety quiz- it only take a few minutes- click below.

[ADULTS water safety quiz](#)

[KIDS water safety quiz](#)



Kids can learn more about water safety by clicking on the picture of the pool above and playing an interactive water safety game on-line at [www.poolsafely.gov](http://www.poolsafely.gov) or by playing an online video game by clicking on the Adventures of Splish and Splash image below

## THE ADVENTURES OF SPLISH AND SPLASH




Welcome to "The Adventures of Splish & Splash!" These child-friendly, interactive games were created to help families teach children about pool and spa safety.

You will meet Splish, a smart, sensible, adult-like character who knows about pool and spa safety, and Splash, an impulsive childlike character, who learns about safety through choices and consequences

Our objective is to show children that going to pools and spas requires

- The permission and accompaniment of parents or caregivers;
- The need to practice safe behavior and obey parents, caregivers and lifeguards and to pay attention to rules.

The videos are not meant to teach swimming but to show that it can be done with careful practice under the attentive watch of a parent or caregiver.

**GAME 1**  
SAFETY AT A  
HOME POOL

**GAME 2**  
SAFETY AT THE  
PUBLIC POOL

**GAME 3**  
SPLASH LEARNS  
HOW TO SWIM

# GLOSSARY

**Acid-** Chemical which lowers pH; can also be used to clean marcite pools.

**Acidic-** Having a pH below 7.0. Opposite of basic.

**Aggressive Water-** Water that is corrosive because it is low in pH and/or calcium hardness and/or total alkalinity.

**Algae-** Microscopic plants that enter your pool via rain, wind, dust, etc. and can cause discoloration of the water or pool surface.

**Algaecide-** Chemical that kills or prevents algae.

**Alkaline-** Having a pH above 7.0.

**Alkalinity-** All pool chemicals work most effectively when alkalinity remains in balance. Alkalinity prevents pH bounce. Low alkalinity is very corrosive to the filter and other pool equipment. High alkalinity promotes scale formation, cloudy water and reduces chlorine efficiency.

**Alum (aluminum sulfates)-** A compound used to cause suspended solids in water to form filterable masses (floculant).

**Ammonia-** A chemical compound of hydrogen and nitrogen that combines with free chlorine in pools to form chloramines, or combined chlorine. Also combines with free bromine to form bromamines.

**Backwash-** The process of cleansing the filter medium and/or elements by the reverse flow of water through the filter.

**Bacteria-** Microscopic organisms that enter your pool from swimmers and dust, among other things, can cause irritation and infection.

**Balanced water-** Total water chemistry that is right where it should be to prevent both corrosion and scaling. The factors to check for in balancing your water are pH, total alkalinity and calcium hardness.

**Ball Valve-** A device that can partially or totally obstruct the flow of water, using a ball-shaped diverter.

**Base-** A chemical used to raise the pH and/or total alkalinity of pool water.

**Basic-** Having a pH above 7.0. Opposite of acidic.

**Breakpoint Chlorination-** The practice of adding a sufficient amount of chlorine to water to destroy the combined inorganic chlorine present. Normally, the amount added is 10 times the combined chlorine concentration.

**Biguanide-** polyhexamethylene biguanide (PHMB), is a chlorine-free organic biocide. SoftSwim is a biguanide. This polymer based pool and spa sanitizer uses a 3 step program to disinfect your pool.

**Buffer-** Any chemical that, when dissolved in water, will resist pH change. Also any chemical solution used to calibrate pH instruments.

**Calcification-** Formation of calcium carbonate on walls of pools or pipes, or in a filter or heater, due to precipitation of calcium carbonate.

**Cavitation-** The formation of partial vacuums when pump capacity exceeds the water replacement supply.

**Channelization-** The undesirable process whereby filter sand is permeated by tubes or channels of calcified or oily material, allowing water to pass freely, without filtration.

**Chelating Agent-** and sequestering agents are used to prevent mineral/metal precipitation (fall-out) by bonding minerals or metals in solution in the water to prevent staining, scaling or water discoloration.

**Chloramine-** A compound formed when chlorine combines with nitrogen or ammonia. It causes eye and skin irritation and has a strong, unpleasant chlorine odor.

**Chlorinator-** A device used to add or deliver a chlorine disinfectant at a controllable rate. Chlorinators are designed for specific chlorine compounds and should only be used with the compounds for which they are designed.

**Chlorine-** A chemical element that exists as a gas in its elemental form, or as a part of a chemical compound. Used as an oxidant to sanitize and disinfect pool water.

**Chlorine Demand-** The amount of free available chlorine combines with nitrogen or other organic compounds.

**Circulation System-** A system of mechanical equipment and/or components designed to ensure even distribution of heat, chemicals, and filtration of water throughout a pool. Includes filters, heaters, pumps, piping, inlets, drains, skimmers, and other devices.

**Clarifier-** A chemical that coagulates suspended particles in water. See coagulant or flocculant.

**Coagulant-** A chemical, usually alum, used in pools to gather and precipitate suspended matter.

**Coping-** The cap on the wall that provides a finishing edge around a pool. Can be formed, cast in place, precast or prefabricated from metal or plastic materials, brick or stone. May be used as part of the system that secures a vinyl liner to the top of the pool wall.

**Corrosion-** Eating away of metal surfaces in your system caused by water that's out of balance.

**Cove-** The radius that joins the floor and wall of a pool.

**Cyanuric acid (Conditioner or Stabilizer)-** Maintaining an appropriate cyanuric acid level protects free chlorine from the sun's UV (Ultra Violet) rays by slowing the breakdown of chlorine by the sun. The ideal range is 30-50 ppm. If the test value is beyond 90 ppm, you may have to drain a portion of the pool's water and replace it with fresh water to reduce the cyanuric acid level. This test should be performed at the beginning of each pool season and twice during the season by Pools & Spas A

Go-Go. Stabilized chlorine (di-chlor and tri-chlor) are chlorines mixed with isocyanurates (conditioner/stabilizer) and will increase the cyanuric level over time.

**Etching-** Corrosion on the surface; the pitting or eating away of a material such as the surface of plaster (marcite).

**Filter Agitation-** Mechanical or manual movement to dislodge the filter aid and dirt from the filter element.

**Filter Aid-** A powder-like substance such as BioGuard's Sparkle Up that can be used to coat the filter media and trap a finer particle.

**Filter Cycle-** The operating time between cleaning or backwash cycles.

**Filter Medium-** A finely graded material (such as sand, diatomaceous earth, polyester fabric, anthracite, etc.) that removes solid particles from water.

**Filter Sand-** A hard, silica-like substance free of carbonates or other foreign material used as the medium in sand filters.

**Filtration-** The process of capturing suspended particles and clarifying water.

**Flocculant (floc)-** Such as BioGuard's Power Floc, is a chemical substance or compound that promotes the combination, agglomeration or coagulation of suspended particles in water.

**Free Chlorine-** A measurement of the available disinfectant (hypochlorous acid) remaining in the water to kill bacteria, algae and other contaminants found in the water.

**Hardness/Calcium Hardness/Water Hardness-** A measure of the amount of calcium and magnesium in your water.

**Hydrogen Peroxide-** A compound of hydrogen and oxygen used as an oxidizer to shock pools treated with a biguanide program.

**Hypochlorous Acid (HOCl)-** The active form of chlorine that kills algae and bacteria in your pool. The most powerful disinfecting form of chlorine in water.

**Mineral Sanitizer (Frog)** – Consists of a housing that holds a mineral cartridge or reservoir. Pool water passes through the mineral filled cartridge and the water erodes the cartridge releasing various metallic ions that kill bacteria and algae. By treating the bacteria and algae, the sanitizer's job is greatly reduced, allowing you to use up to 50% less chlorine.

**Organic Matter-** In a pool, material introduced to the water by users and the environment such as perspiration, urine, saliva, suntan oil, cosmetics, lotions, dead skin, and similar debris.

**Organism-** Plant or animal life. Usually refers to algae or bacteria-like growth in pool water.

**OTO (Orthotolidine)-** A colorless reagent used in liquid test kits. OTO reacts with chlorine or bromine to produce a series of yellow to orange colors, indicating the amount of chlorine or bromine in water. Effectively measures Total Chlorine NOT Free Chlorine

**Oxidizer-** A disinfectant that works to eliminate irritating organic compounds from pool water.



**pH-** A measure of acidity and alkalinity of pool water. If the pH level is high (alkaline), it will cause eye and skin irritation, cloudy water and scale formation. Chlorine and filter efficiency will decrease. If pH is too low (acidic), it will cause eye and skin irritation, a breakdown of total alkalinity, and corrosion of metal. Acceptable levels are 7.2-7.8, with an ideal reading of 7.4-7.6.

**PPB-** Part per billion, the measure of a chemical's concentration in your water (this measure is usually used when testing for phosphates).

**PPM-** Part per million, the measure of a chemical's concentration in your water.

**Precipitate-** A solid material that is forced out of a solution by some chemical reaction and settles out or remains as a haze in suspension (turbidity).

**Priming-** Refers to evacuating the air; in a pump strainer housing you can manually prime the pump by filling with water and quickly replacing the lid.

**Salinity-** The sodium chloride or salt content of water.

**Scale-** White, gray or brownish spots on surface or equipment caused by water that's out of balance.

**Sequestering Agent-** and sequestering agents are used to prevent mineral/metal precipitation (fall-out) by bonding minerals or metals in solution in the water to prevent staining, scaling or water discoloration.

**Shock Treatment-** The practice of adding significant amounts of an oxidizing chemical to water to destroy ammonia and nitrogenous and organic contaminants.

**Stabilized Chlorinating Products-** A chlorinating compound that contains cyanuric acid protecting the chlorine residual against the negative effects of the sun. Lasts up to 5 times longer than unstabilized chlorinating compounds.

**Superchlorination or Shock-** The practice of periodically adding an oxidizer to destroy chloramines and other undesirable compounds that builds in your pool water. Free Chlorine levels need to reach 10 ppm or higher for a minimum of 4 hours for a shock treatment to be effective. You should routinely shock your pool every 1-2 weeks with an increase in frequency during heavy bather loads, high heat or heavy rain. If water problems such as cloudy water or algae appear you will want to shock the water.

**Total Alkalinity-** The ability or capacity of water to resist change in pH, also known as the buffering capacity. Measured with a test kit and expressed as ppm.

**Total Chlorine-** The measurement of your water is a combination of chlorine in the form of chloramines (already used chlorine) and free available chlorine (unused chlorine).

**Total Dissolved Solids (TDS)-** A measure of the total amount of dissolved matter in water, e.g., calcium, magnesium, carbonates, bicarbonates, metallic compounds, etc.

**Turbidity-** A cloudy condition of water due to the presence of extremely fine particles in suspension that interfere with the passage of light.

**Winterizing-** The process of preparing a pool for freezing weather. Includes chemical treatment of the standing water, plus physical and chemical protection against freezing of the pool and its equipment.

We hope that you have found your Pools & Spas A Go-Go interactive SPARCO pool manual to be an informative and useful tool as you learn about the care and maintenance of your swimming pool. We encourage you to reference this program often to find answers and advice for all of your pool care needs. Remember, if at anytime you have unanswered questions, the staff at Pools & Spas A Go-Go are only a phone call or short drive away. Our sales and service personnel are among the most experienced in the industry and are always ready to help.

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