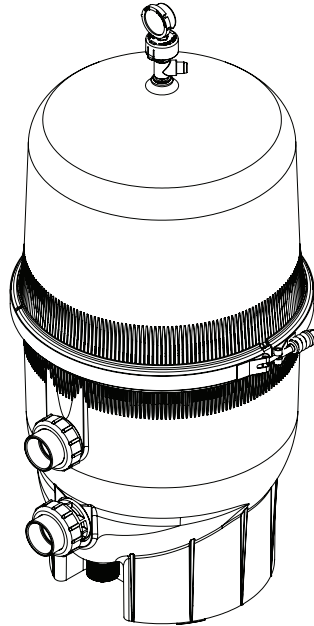




# CLEAN AND CLEAR<sup>®</sup> PLUS CARTRIDGE FILTER



## INSTALLATION AND USER'S GUIDE

IMPORTANT SAFETY INSTRUCTIONS  
*READ AND FOLLOW ALL INSTRUCTIONS*  
SAVE THESE INSTRUCTIONS



**⚠ WARNING**



Pressurized air can cause the lid to separate from the tank with great force. To reduce the risk of severe injury or death, relieve pressure by opening air relief valve before opening filter. Before starting the pump after servicing, ensure that clamp band is correctly fastened. See Important Warnings and Safety Instructions (page iii) and follow all instructions exactly; including the *Opening the Filter* (page 4), *Installing the Filter Lid and Clamp Ring* (page 5), and *Start-Up Instructions* (page 6).

## CUSTOMER SERVICE / TECHNICAL SUPPORT

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If you have questions about ordering Pentair Aquatic Systems replacement parts, and pool products, please contact:

### Customer Service and Technical Support, USA

(8 A.M. to 4:30 P.M. — Eastern/Pacific Times)

Phone: (800) 831-7133

Fax: (800) 284-4151

### Web site

Visit [www.pentairpool.com](http://www.pentairpool.com) or [www.staritepool.com](http://www.staritepool.com) for information about Pentair products.

### Sanford, North Carolina (8 A.M. to 4:30 P.M. ET)

Phone: (919) 566-8000

Fax: (919) 566-8920

### Moorpark, California (8 A.M. to 4:30 P.M. PT)

Phone: (805) 553-5000 (Ext. 5591)

Fax: (805) 553-5515

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# IMPORTANT WARNINGS AND SAFETY INSTRUCTIONS



## IMPORTANT NOTICE:

This guide provides installation and operation instructions for the Clean and Clear® Plus Cartridge Filter. Consult Pentair Water Pool and Spa, Inc. with any questions regarding this equipment.

**Attention Installer:** This guide contains important information about the installation, operation and safe usage of this product. This information should be given to the owner and/or operator of this equipment after installation.

**Attention User:** This manual contains important information that will help you in operating and maintaining this filter. Please retain it for future reference.



This is the safety alert symbol. When you see this symbol on your system or in this manual, look for one of the following signal words and be alert to the potential for personal injury.



**DANGER**

Warns about hazards that can cause death, serious personal injury, or major property damage if ignored.



**WARNING**

Warns about hazards that may cause death, serious personal injury, or major property damage if ignored.



**CAUTION**

Warns about hazards that may or can cause minor personal injury or property damage if ignored.

### NOTE

Indicates special instructions not related to hazards.

Carefully read and follow all safety instructions in this manual and on equipment. Keep safety labels in good condition; replace if missing or damaged.

## Consumer Information and Safety

This filter is designed and manufactured to provide many years of safe and reliable service when installed, operated and maintained according to the information in this manual and the installation codes referred to in later sections. Throughout the manual, safety warnings and cautions are identified by the “⚠” symbol. Be sure to read and comply with all of the warnings and cautions.



**WARNING**

Before installing this product, read and follow all warning notices and instructions which are included. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage. Call (800) 831-7133 for additional free copies of these instructions or replacement safety labels.



**WARNING**

Do not operate the filter until you have read and understand clearly all the operating instructions and warning messages for all equipment that is a part of the pool circulating system. The following instructions are intended as a guide for initially operating the filter in a general pool installation. Failure to follow all operating instructions and warning messages can result in property damage or severe personal injury or death.



**WARNING**

Due to the potential risk that can be involved it is recommended that the pressure test be kept to the minimum time required by the local code. Do not allow people to work around the system when the circulation system is under pressure test. Post appropriate warning signs and establish a barrier around the pressurized equipment. If the equipment is located in an equipment room, lock the door and post a warning sign.



Never attempt to adjust any closures or lids or attempt to remove or tighten bolts when the system is pressurized. These actions can cause the filter to separate and could cause severe personal injury or death if they were to strike a person.



**WARNING**

This filter must be installed by a qualified pool serviceman in accordance with all applicable local codes and ordinances. Improper installation could result in death or serious injury to pool users, installers, or others and may also cause damage to property.



**WARNING**

Always disconnect power to the pool circulating system at the circuit breaker before servicing the filter. Ensure that the disconnected circuit is locked out or properly tagged so that it cannot be switched on while you are working on the filter. Failure to do so could result in serious injury or death to serviceman, pool users or others due to electric shock.



**WARNING**

DO NOT permit children to use this product.

## IMPORTANT WARNINGS AND SAFETY INSTRUCTIONS

### WARNING

#### THIS SYSTEM OPERATES UNDER HIGH PRESSURE



When any part of the circulating system, (e.g., closure, pump, filter, valve(s), etc.), is serviced, air can enter the system and become pressurized. Pressurized air can cause the top closure to separate which can result in severe injury, death, or property damage. To avoid this potential hazard, follow these instructions:

1. Let air and pressure out of system before and after servicing.
  - a. **Shut off pump and RELIEVE PRESSURE by opening the manual air/pressure relief valve before servicing, including before tightening the clamp bolt.** Follow the *Opening the Filter* instructions exactly (page 4).
  - b. Follow *Start-Up Instructions* exactly after completing service (page 6). **The air/pressure relief valve must remain open until water comes out**, allowing all air out of the system.
2. Install lid and clamp ring properly.
  - a. Follow the *Installing the Filter Lid and Clamp Ring* instructions exactly (page 5). **The nut must be tightened until the spring is compressed when clamp is installed.** Tap the clamp with a rubber mallet or similar tool after clamp installation to ensure proper seating.
3. Maintain circulation system properly to help prevent air entering the system.
  - a. Replace worn or damaged parts immediately, (e.g., closure, pressure gauge, valve(s), O-rings, etc.).
  - b. Maintain proper water level in the pool or spa.
4. Verify that the return line to the pool is unobstructed. Ensure return valves are open and any winterizing plugs are removed.

### WARNING

#### AVOID DAMAGING SYSTEM

**Never Exceed Maximum Pressure of Components.** The maximum working pressure of this filter is 50 psi. Never subject this filter to higher pressure, even when conducting hydrostatic pressure tests. Pressures above 50 psi can damage your filter.

Be sure the maximum pressure of the filter system does not exceed the maximum pressure of any components within the system (typically stated on each component), including during hydrostatic or external leak tests. Exceeding the maximum pressure of a component can result in that component failing. If you do not know the pool or spa system operating pressure, install an ASME approved automatic Pressure Relief or Pressure Regulator in the circulation system set to the lowest working pressure of any of the components in the system.

### WARNING



Certain codes may require pressure testing the system. Performing pressure tests increases the risk of component failure. Due to the potential risk that can be involved, keep the pressure test to the minimum time required by the local code and take precautions. If pressure testing is necessary, follow these precautions:

1. Keep people away.
  - a. Do not allow people to work around the system when the circulation system is under pressure test. Post appropriate warning signs and establish a barrier around the pressurized equipment. If the equipment is located in an equipment room, lock the door and post a warning sign.
2. Never exceed maximum operating pressure.
  - a. When performing hydrostatic pressure tests or when testing for external leaks of the completed filtration and plumbing system, ensure that the Maximum Pressure that the filtration system will be subjected to does not exceed the maximum working pressure of any of the components contained within the system.

# GENERAL INFORMATION

## **WARNING**



### **THIS SYSTEM 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 separate which can result in serious injury, death, or property damage. To avoid this potential hazard, follow the instructions below.

## Filter Overview

- Large filter area designed for increased debris capacity
- NSF Listed
- High Flow™ Manual Air Relief Valve provided
- 1.5" x 2" Bulkhead Unions allows for easy piping installation

## General Operation Information

Read and follow all instructions and warnings before installing or servicing your filter. Proper installation and operation can prevent unnecessary repairs and maintenance.

## **WARNING**



Your filter is a piece of machinery, do not tamper with it, attempt to disassemble it or otherwise adjust it unless you fully understand it's operation. Serious injury or death can occur if the equipment is improperly handled. Consult a pool service professional for maintenance and service assistance.

1. The Clean and Clear® Plus Cartridge Filter operates under pressure and operates in a safe manner if clamped properly and without air in the circulating system.
2. The maximum working pressure of this filter is 50 psi. Never subject this filter to pressure in excess of this amount, even when conducting hydrostatic pressure tests.
3. Be sure the maximum pressure of the filter system does not exceed the maximum pressure of any components within the system during hydrostatic or external leak tests. Consult the maximum pressure stated on each component of the system.
4. The pressure gauge is the primary indicator of how the filter is operating. Maintain your pressure gauge in good working order.
5. **Clean your filter when pressure reads between 8-10 psi higher than the “Original Starting Pressure”, or when significant reduction in flow is noticed.** The pressure reading increases as it filters dirt from your pool. This build up of pressure will vary due to different bathing loads, temperature, environmental conditions, etc.

**Note:** When using a variable speed pump the “Original Starting Pressure” will be dependent on the pump speed (RPM) when recording the original operating pressure. Record the “Original Pump RPM” in **Table 1**.

## Pressure Tests

When performing hydrostatic pressure tests or when testing for external leaks of the completed filtration and plumbing system, ensure that the Maximum Pressure that the filtration system will be subjected to **DOES NOT EXCEED THE MAXIMUM WORKING PRESSURE OF ANY OF THE COMPONENTS CONTAINED WITHIN THE SYSTEM.** In most cases, the maximum pressure will be stated on each component of the system.

If you do not know the pool or spa system operating pressure, install an ASME approved automatic Pressure Relief or Pressure Regulator in the circulation system set to the lowest working pressure of any of the components in the system.

**Table 1**

ORIGINAL STARTING PRESSURE IS: \_\_\_\_\_ psi.  
(pounds per square inch)

SERVICE THE MEDIA AT: \_\_\_\_\_ psi.

ORIGINAL PUMP RPM: \_\_\_\_\_ rpm.  
(for Variable Speed Pumps Only)

# INSTALLATION

## ⚠ WARNING

This filter must be installed by a qualified pool technician in accordance with all applicable local codes and ordinances. Improper installation could result in death or serious injury to pool users, installers, servicers, or others and may also cause damage to property.

## ⚠ WARNING



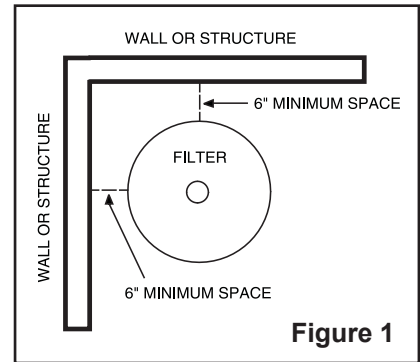
**For Installation of Electrical Controls at Equipment Pad (ON/OFF Switches, Timers, Control Systems and Automation)** Install all electrical controls at the equipment pad, such as ON/OFF switches, timers, control systems, etc. to allow the operation (startup, shutdown or servicing) of any pump or filter so the user does not place any portion of his/her body over or near the pump strainer lid, filter lid or valve closures. This installation should allow the user enough space to stand clear of the filter and pump strainer lid during system startup, shutdown or servicing of the system filter.

## Filter Location

1. The Clean and Clear® Plus Cartridge Filter should be mounted on a level concrete slab. **Position the filter so that instructions, warnings and the pressure gauge are visible to the operator and readable.** It also should be positioned so that the piping connections, control valve and waste drain plug are convenient and accessible for servicing and winterizing.
2. Be certain to install electrical controls (e.g., on/off switches, timers, control systems, etc.) so that the user is allowed enough space to stand clear of the filter and pump during startup, shutdown or servicing.
3. Allow sufficient clearance around the filter to permit visual verification that the clamp is properly installed around the tank flanges, see **Figure 1**.

**Note:** See page 5, *Installing the Filter Lid and Clamp Ring*.

4. Allow sufficient space above the filter to remove the filter lid for cleaning and servicing. This distance will vary with the model of filter you are using. See **Table 2** for the required vertical clearance.
5. Position the filter to safely direct water drainage away from electrical equipment or anything that might be damaged.
6. Position the High Flow™ Manual Air Relief Valve to safely direct purged air or water (See page 3, *Installing the Manual Air Relief Valve*).



**Table 2**

Model No.	Size	Vert. Clearance Req. (From Ground Level)
CCP240	240 sq. ft.	56in.
CCP320	320 sq. ft.	62in.
CCP420	420 sq. ft.	68in.
CCP520	520 sq. ft.	74in.

## ⚠ WARNING



**RISK OF ELECTRICAL SHOCK OR ELECTROCUTION.** Water discharged from an improperly positioned filter or valve can create an electrical hazard that can cause severe personal injury as well as damage property.

## Filter Plumbing

Make all plumbing connections in accordance with local plumbing and building codes. Do not use pipe joint compound, glue or solvent on the bulkhead connections. The provided filter plumbing connections include an O-ring seal.

## ⚠ CAUTION

Use PTFE or silicone based lubricants when lubricating the O-rings on the union and bulkhead couplings. Use of petroleum based products will damage the equipment.

## Installing the Manual Air Relief Valve



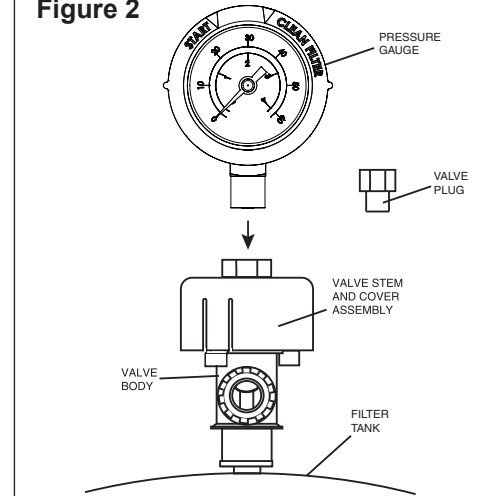
**WARNING** The High Flow manual air relief valve and pressure gauge are included with this filter to help ensure safe operation of the equipment. Always maintain these components in good working condition.

1. Remove the High Flow™ Manual Air Relief Valve and the pressure gauge from the accessories package included with your Clean and Clear® Plus Cartridge Filter.
2. Thread the manual air relief valve into the threaded hole at the top of the filter tank.

**Note: Hand tighten only!** Over tightening the valve can cause damage to the tank or valve connection threads.

3. Verify that the valve is positioned to safely direct purged air or water away from electrical equipment or anything that might be damaged.

Figure 2



**RISK OF ELECTRICAL SHOCK OR ELECTROCUTION.** Water discharged from an improperly positioned filter or valve can create an electrical hazard that can cause severe personal injury as well as damage property.

4. Remove the plug from the top of the manual air relief valve with a 9/16" wrench.
5. Wrap the pressure gauge connection threads with thread seal tape (two full wraps of tape will be enough).
6. Thread the pressure gauge into the top of the manual air relief valve. **Hand tighten only!**
7. Follow *Start-up Instructions* exactly (page 6).

## OPENING, CLOSING, AND START-UP

**CAUTION** The following information should be read carefully since it outlines the proper manner of care and operation for your filter system. As a result of following these instructions and taking the necessary preventative care, you can expect maximum efficiency and life from your filtration system.

### Opening the Filter

Follow these instructions **exactly** to prevent the lid from separating during system start-up, operation or servicing.

#### WARNING



This filter operates under high pressure. Air can also enter the system and become pressurized.

If there is air in the system, there will be positive pressure that could cause the lid to separate from the filter when you release the clamp or during system start-up or operation (see Important Warnings and Safety Instructions, page ii-iii).

If there is no air in the system, there may be negative pressure, which would make the system hard to open.

**Follow these instructions exactly** - opening the relief valve equalizes the pressure and releases any trapped air within the system, making it safe and easy to open.

#### RECOMMENDED EQUIPMENT:

- Ratchet Wrench
- 7/8" Socket
- Socket Extender (if needed)

#### PROCEDURE:

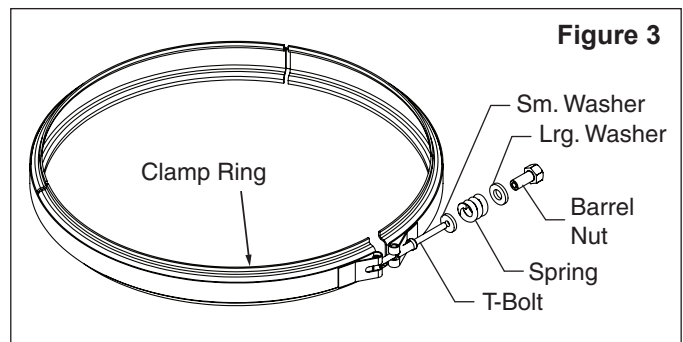
1. Shut off pump and relieve pressure.
  - a. Turn the pump OFF, shut OFF any automatic controls (e.g., timers), and disconnect power to ensure that the system is not inadvertently started during maintenance.
  - b. Open the High Flow™ Manual Air Relief Valve by turning the valve cover assembly counter-clockwise until it snaps into the full open position.
  - c. Stand clear of the filter and wait until all pressure is relieved. Pressure gauge must read zero (0 psi).
2. Open the waste drain plug on the bottom of the Clean and Clear® Plus Cartridge Filter. Allow all water to drain from the bottom of the filter tank.
3. Loosen the clamp's barrel nut with a 7/8" wrench, allowing the spring coils to decompress. See **Figure 4**. Remove the barrel nut, spring and two washers from the T-bolt and place them in a safe place where they will not be lost.
4. Once the spring has fully decompressed the clamp assembly will rest in the open position. Carefully lift the filter lid straight up from the lower body of the filter. If the lid is tightly sealed to the filter body you may have to gently push the filter lid from side to side in order to separate the lid from the bottom tank manifold.

#### CAUTION

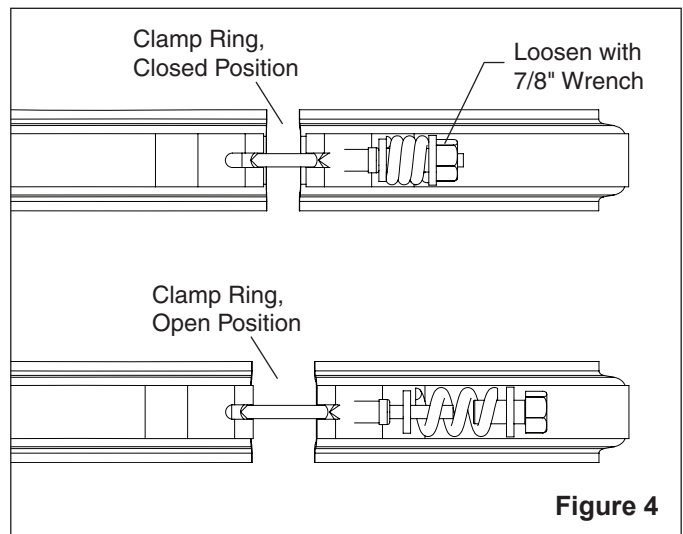
DO NOT use the relief valve as a handle or lever since this may damage the valve.

5. Place the tank lid in a safe place where it will not be damaged while performing any maintenance.

**NOTE:** Attempt to minimize the amount of debris that comes in contact with the tank O-ring while it is exposed. This will help prolong the life of the O-ring.



**Figure 3**



**Figure 4**



## Installing the Filter Lid and Clamp Ring

### ⚠ WARNING



Follow these instructions **exactly** to prevent the lid from separating from the filter during system start-up or operation. (See *Important Warnings and Safety Instructions*, page ii-iii).

### RECOMMENDED EQUIPMENT:

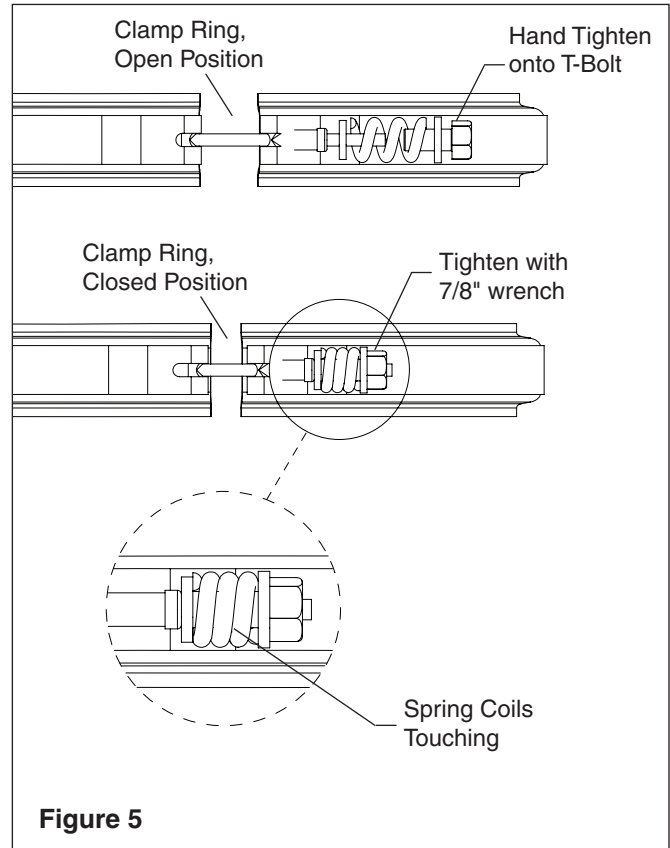
- Ratchet Wrench
- 7/8" Socket
- Socket Extender (if needed)
- Rubber Mallet

### PROCEDURE:

1. Be sure the O-ring is clean and in position in the lower tank half. Press the Clean and Clear® Plus Cartridge Filter lid onto the lower half so the O-ring fits in between the tank halves.
2. Hold the ends of the clamp ring apart and place over both upper and lower tank flanges. Bring the ends of the filter clamp together.
3. Insert the T-bolt through the other side of the clamp and hold together.
4. Place the small washer onto the T-bolt.
5. Place the spring, large washer and barrel nut onto the T-bolt and tighten the nut by hand. Be sure the clamp ring fits easily on the tank flanges.
6. After tightening by hand:
  - a. Use a 7/8 in. wrench (ratchet wrench recommended) to tighten further.
  - b. Tap around the outside of the clamp ring with a rubber mallet (or similar tool) multiple times around the entire clamp to fit the clamp properly.
  - c. Continue to tighten until the spring coils touch.
  - d. Tap around the entire clamp again and verify the spring coils remain touching. If not, continue to tighten the nut.

**Note:** The clamp is installed correctly only when the spring coils remain touching after tapping the clamp (See **Figure 5**).

7. Close the waste drain plug at the bottom of the filter.
8. Follow **Start-Up Instructions** exactly (see page 6).



**Figure 5**

**Note:** Check the spring coils at least once a month to ensure proper tension. If spring coils do not touch then **shut off pump and relieve pressure** and tighten the nut and tap filter clamp until the coils touch.

### ⚠ WARNING



DO NOT tighten the nut or attempt to adjust the clamp ring or lid while the system is turned on or under pressure. This could cause the lid to separate from the filter

## Start-Up Instructions

### ⚠ WARNING

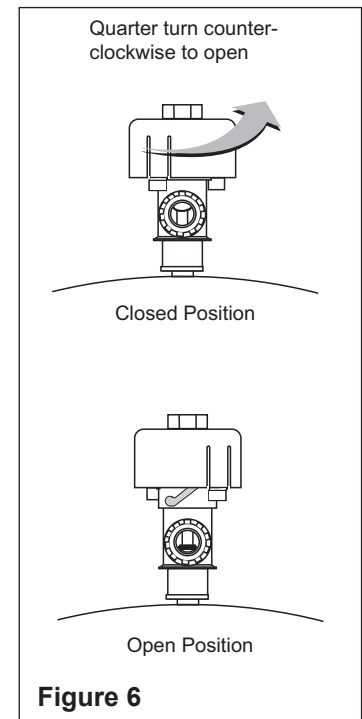


Follow these instructions **exactly** to prevent the lid from separating from the filter during system start-up or operation. (See *Important Warnings and Safety Instructions*, page ii-iii).

1. Be sure the **spring on the clamp ring is fully compressed, with coils touching.**
2. Open the High Flow™ Manual Air Relief Valve by turning the valve cover assembly a quarter turn counter-clockwise, until it snaps into the full open position. See **Figure 6**.
3. Stand clear of the filter tank, then start the pump.
4. Watch for proper operation. The system is not working properly if:
  - a. The pressure gauge indicates pressure before water out-flow appears.
  - b. A solid stream of water does not appear within 30 seconds after the pump's inlet basket fills with water.
  - c. Water leaks from where the two halves of the filter come together.

If any of these conditions exist, **shut off the pump immediately**. Open the manual air relief valve to relieve pressure and clean the valve (see *Cleaning the Manual Air Relief Valve*, page 7). If the problem persists, call Pentair Technical Service at (800) 831-7133 for assistance.

5. After a steady stream of water appears, close the manual air relief valve by turning the valve cover assembly a quarter turn clockwise.
6. The first time the system is started up, fill out Table 1 on page 1 and the corresponding label on the equipment:
  - a. Record the "Original Starting Pressure"
  - b. Fill in the pressure at which to clean the filter (8-10 psi higher than the "Original Starting Pressure").
  - c. If the system includes a variable speed pump, record "Original Pump RPM".



# MAINTENANCE

## Maintaining the Pressure Gauge

The pressure gauge is the primary indicator of how the system is operating, so correct functioning is critical. Replace the pressure gauge (Pentair P/N 190058) if it does not meet the requirements below:

1. Pressure gauge should go to zero (0) when the system is turned off and pressure is relieved.
2. Pressure gauge should indicate pressure when the system is operating.
3. The pressure gauge should be readable and not damaged in anyway

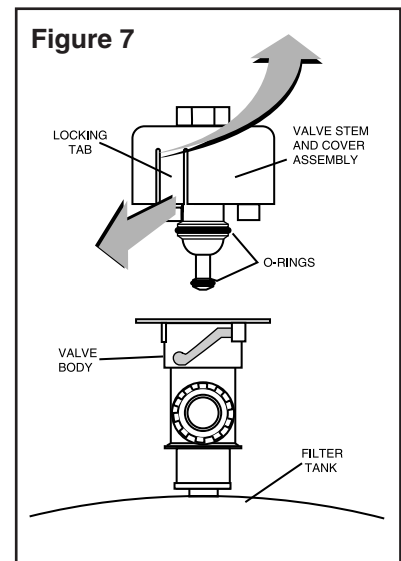
## Cleaning the Manual Air Relief Valve

### RECOMMENDED EQUIPMENT:

- 5/16" Drill Bit (to check air passage)
- Silicone-based Lubricant (if needed)

### PROCEDURE:

1. Shut off pump and relieve pressure.
  - a. Turn the pump OFF and shut OFF any automatic controls (e.g., timers) and disconnect power to ensure that the system is not inadvertently started during maintenance.
  - b. Open the manual air relief valve by turning the valve cover assembly a quarter turn counter-clockwise until it snaps into the full open position.
  - c. Stand clear of the filter and wait until all pressure is relieved. **Pressure gauge must read zero (0 psi).**
2. With the relief valve attached to the Clean and Clear® Plus Cartridge Filter tank, pull out the locking tabs and unlock the valve stem and cover assembly from the valve body with a counter-clockwise turn, see **Figure 7**.
3. Pull the valve stem and cover assembly straight up and away from the valve body.
4. Clean and check the valve stem and body:
  - a. Clean off any debris.
  - b. Verify that the filter tank's air passage is open by inserting a 5/16" drill bit through the valve body.
  - c. Verify that the valve stem O-rings are in good condition, properly positioned, and lubricated with a silicone-base lubricant.



If needed, use only a PTFE or silicone-base lubricant on the O-rings. Use of petroleum based products on O-rings will damage the equipment.

5. Reinstall the valve stem and cover assembly with a downward and clockwise motion until it snaps into position.

## When to Clean Your Filter

Proper operation can prevent avoidable repairs and maintenance.

Use the pressure gauge to determine when to clean your Clean and Clear® Plus Cartridge Filter for proper operation. The pressure reading increases as dirt is filtered from your pool. This buildup of pressure will vary due to different bathing loads, temperature, environmental conditions, etc.

### ⚠ WARNING



**Clean your filter** when pressure reads between **8-10 psi higher** than the “Original Starting Pressure” recorded in Table 1 (page 1), or when significant reduction in flow is noticed.

**Note:** When using a variable speed pump the “Original Starting Pressure” will be dependent on the pump speed (RPM) when recording the original operating pressure.

## Cleaning the Filter Cartridges

1. Follow *Opening the Filter* (page 4) exactly.
2. Remove hair and lint strainer pot lid from the pump and clean basket. Replace strainer basket and secure strainer pot lid.
3. Remove the compression spring and spring adapter by pulling them straight up.
4. Separate the top manifold from the filter's cartridges and lay the manifold to the side. See **Figure 8**.
5. Carefully remove each cartridge element separately.
6. Using a garden hose with a straight flow nozzle, wash down the entire filter element. Wash from the top down, holding the nozzle at a 45-degree angle to the cartridge (See **Figure 9**). Pay special attention to the area between pleats.
7. For cartridges used in pools or spas where high levels of perspiration, suntan lotions and other oils are present:
  - a. Soak the cartridge for at least one hour (overnight is most effective) in one of the following:
    - A commercial filter cleaner

### ⚠ WARNING

Heed all manufacturers' instructions and warnings when using polyhexamethylene biguanide sanitizers or other cartridge filter cleaner solutions.

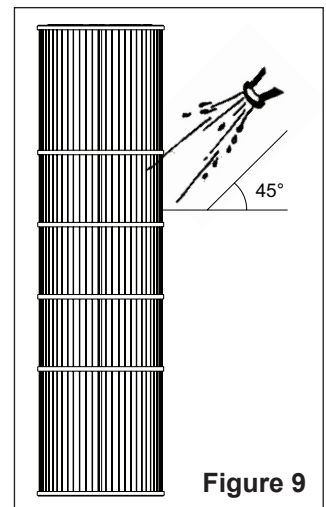
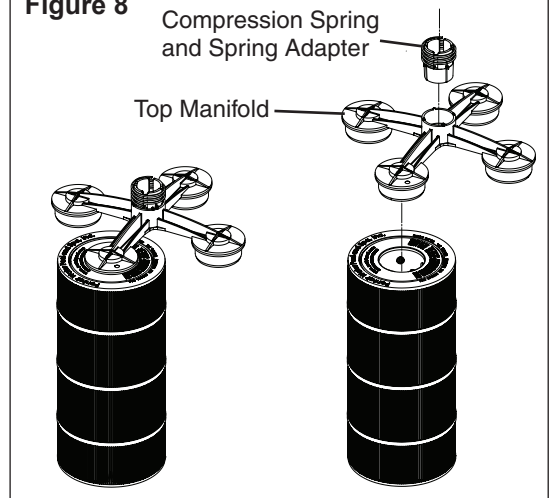
- One cup trisodium phosphate (TSP) to five gallons of water
  - One cup dishwasher detergent to five gallons of water
- b. Rinse the cartridge to remove oils and cleaning solution.

### ⚠ CAUTION

Failure to remove all oils and cleaning solutions before acid soaking will result in permanent restriction of water flow through the filter and will cause premature cartridge failure.

8. Direct the water spray to wash out the inside of the tank body and bottom manifold. Water and debris will drain out through the open drain plug.
9. Check gasket around outer lip of bottom plate. Gasket must be firmly and evenly set around the entirety of the outer lip.
10. Place bottom manifold, four (4) cartridges and top manifold in place. Make sure the spring and standpipe assembly are retained on the top manifold.
11. Be certain the O-ring is in position in the lower tank half and free of debris.
12. Follow *Installing the Filter Lid and Clamp Ring* exactly (page 5).

**Figure 8**



**Figure 9**

## Acid Soaking the Filter Cartridges

After an extended period of operation, it may be necessary to soak the cartridges in an acid solution. Acid soaking will remove algae, calcium carbonate, iron and other mineral build-ups from the cartridges. If not removed, these mineral deposits can lead to the restriction of water flow through the Clean and Clear® Plus Cartridge Filter and can impede efficient operation of the equipment.

### ⚠ WARNING

Muriatic acid is corrosive and can lead to inflammation or burns to body tissue.



ALWAYS wear rubber gloves, safety glasses and an N-95 dust mask when handling acid to prevent serious bodily injury.

### ⚠ CAUTION

To prevent degradation of the acid by UV light, store muriatic acid in an opaque container and away from direct sunlight.

### RECOMMENDED EQUIPMENT:

- Large Plastic Container
- Garden Hose with a Straight Flow Nozzle
- Muriatic Acid (stored in opaque container)
- Rubber Gloves
- Safety Glasses
- N-95 Dust Mask

### PROCEDURE:

1. Remove all oils and cleaning solutions from the cartridges.

### ⚠ CAUTION

Acid soaking without performing this step will result in permanent restriction of water flow through the filter and premature cartridge failure.

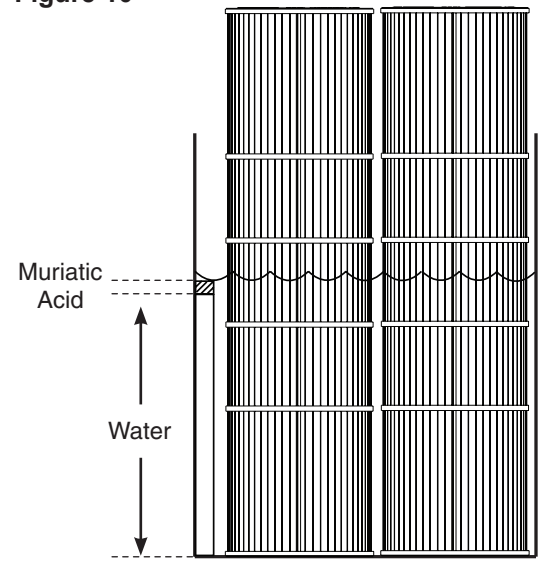
2. Put on protective equipment - rubber gloves, safety glasses and N-95 dust mask.
3. In a large plastic container, create a solution of one part muriatic acid to twenty parts water. See **Figure 10**.

### ⚠ WARNING

Introduce the muriatic acid as close to the water's surface as possible. This will minimize splash and reduce the risk of user contact with the acid.

4. Gently place the bottom of the cartridges into the acid solution. Allow the cartridges to soak in the solution for 10 minutes, or until bubbling stops.
5. Turn the cartridges over, placing the top halves into the solution. Allow the top halves of the cartridges to soak for 10 minutes, or until bubbling stops.
4. Remove the cartridges from the acid solution.
5. Using a garden hose with a straight flow nozzle, thoroughly wash down the entire filter element. Wash from the top down, holding the nozzle at a 45-degree angle to the cartridge. See **Figure 9**, on page 8.
6. Reinstall the cartridges and dispose of the acid solution in accordance with local regulations.

**Figure 10**



## Replacing Filter Cartridges

Filter cartridge element life will vary with pool conditions such as bather load, wind, dust, etc. You can expect an average cartridge life of three (3) years under normal conditions.

### To replace filter cartridges:

1. Follow *Opening the Filter* exactly (page 4).
2. Remove the compression spring and spring adapter by pulling them straight up. Once the spring and spring adapter have been removed, separate the top manifold from the filter cartridges and lay the manifold to the side. See **Figure 6**).
2. Carefully remove each cartridge element separately.
3. Check gasket around outer lip of bottom plate. Gasket must be firmly and evenly set around the entirety of the outer lip.
4. Install the replacement cartridges onto the bottom manifold. Reinstall the top manifold on to the new cartridges.  
**Note:** Be sure the spring and standpipe assembly are retained on the top manifold.
5. Follow *Installing the Filter Lid and Clamp Ring* exactly (page 5).

## TROUBLESHOOTING

### 1. AIR ENTERING THE SYSTEM.

Air entering your Clean and Clear® Plus Cartridge Filter can cause lid separation. Correct any conditions in your filtration system that allow air to enter the system.

#### **WARNING**



Air entering the system can cause the lid to separate from the filter. If the below symptoms are observed, do not attempt to remove or tighten the clamping system or perform any other servicing until you have shut off pump and relieved all air and pressure in accordance with the Opening the Filter instructions (page 4). (See Important Warnings and Safety Instructions, page ii-iii)

#### **Symptoms:**

- Low water level in pool or spa - skimmer starving for water with pump running.
- Air bubbles or low water level in pump hair and lint pot
- Air bubbles coming out of water return lines into pool or spa with pump running
- Air is discharged from the air/pressure relief valve on top of the filter when the valve is opened with the pump running.

#### **Potential Causes and Solutions:**

- Low water level: *Add water to pool or spa.*
- Clogged skimmer basket: *Unclog.*
- Damaged or leaking components (e.g., split suction cleaner hose, leak in pump hair and lint pot lid, or leak in pump suction line): *Repair or replace component.*

### 2. SHORT FILTER CYCLES BETWEEN CLEANING.

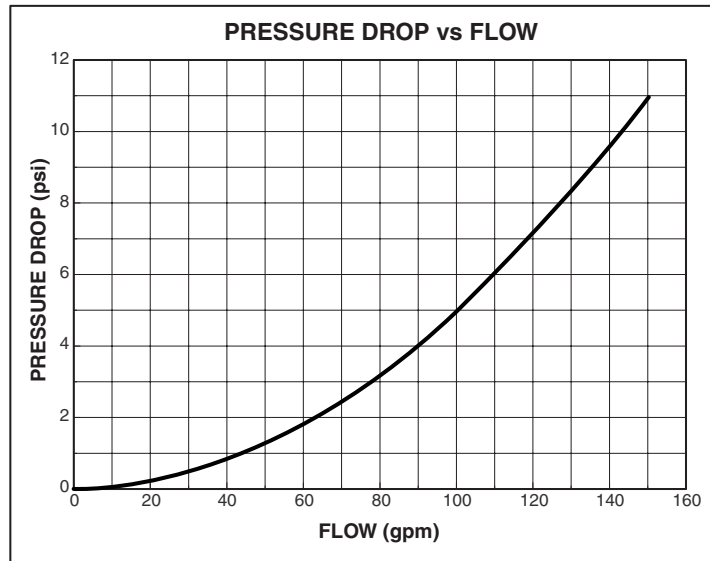
Until the water initially put into the pool has been completely filtered, short filter cycles in between cleanings are normal. In most cases pool owners are dismayed by the undesirable color and appearance of water in a newly filled pool. Plaster dust can be responsible for short filter cycles, requiring frequent cleaning.

### 3. PRESSURE DROP ON GAUGE.

If pressure drops on gauge, check skimmer basket and pump basket first for debris. If the baskets are clean, there is likely a problem with the pump. Refer to pump manual for pump troubleshooting.

# TECHNICAL DATA

## Flow Rates

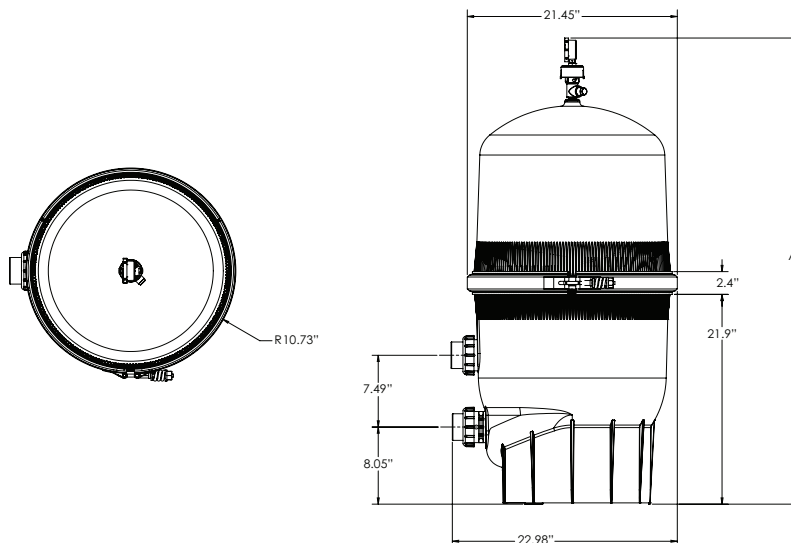


Clean and Clear® Plus Cartridge Filters						
Recommended Flow Rate						
Model #	Filter Area (Sq. Ft.)	Vertical Clearance*	Flow Rate (GPM)	Turnover Capacity (Gallons)		
				6 Hours	8 Hours	12 Hours
CCP240	240	56 in.	90	32,400	43,200	64,800
CCP320	320	62 in.	120	43,200	57,600	86,400
CCP420	420	68 in.	150	54,000	72,000	108,000
CCP520	520	74 in.	150	54,000	72,000	108,000

**NOTE:** Actual system flow will depend on plumbing size and other system components.

\* Required Clearance to remove filter elements and lid.

## Dimensional Drawings

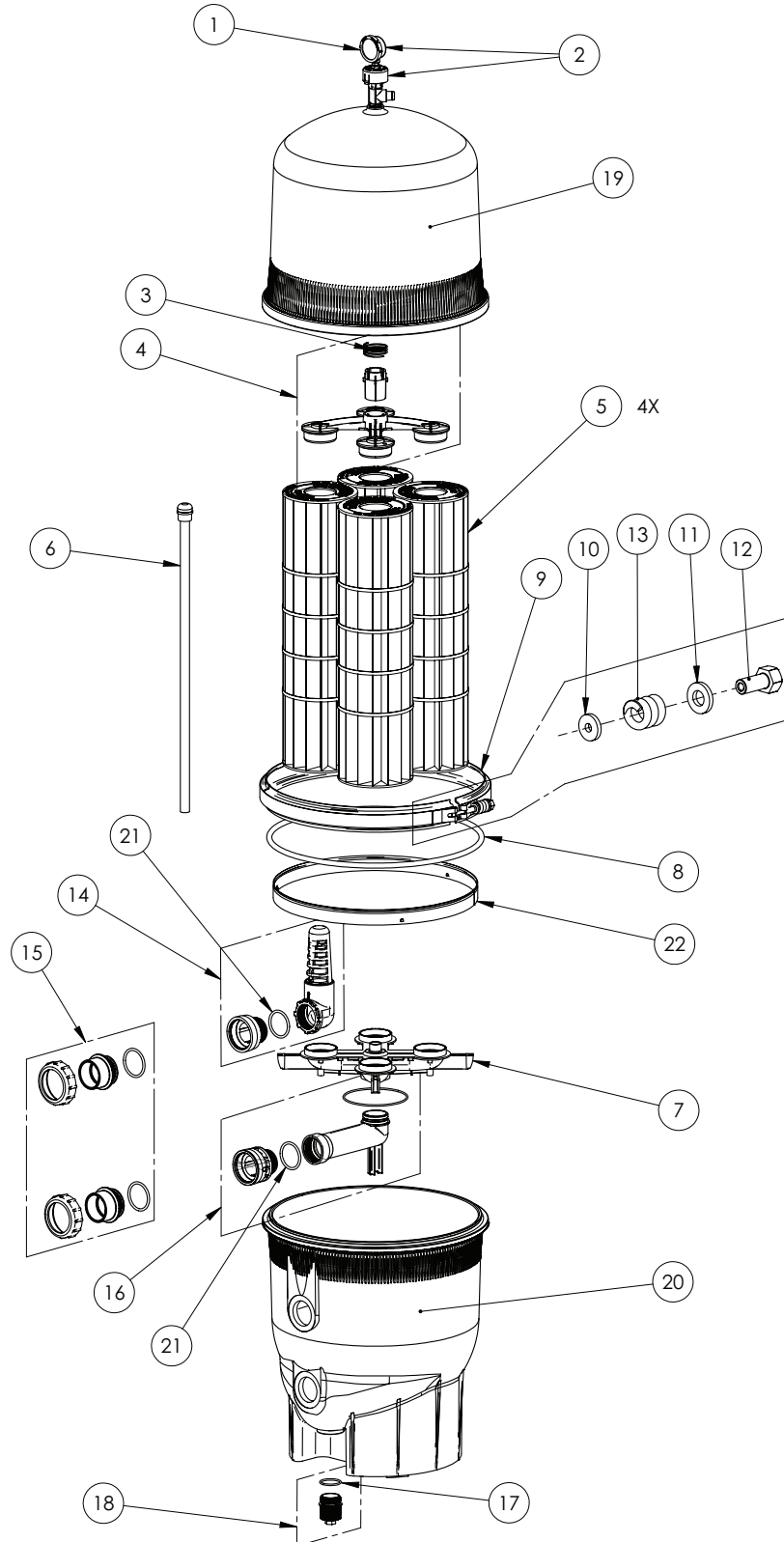


MODEL	DIM "A"
CCP 240	37"
CCP 320	43"
CCP 420	49"
CCP 520	56"



# REPLACEMENT PARTS

## Illustrated Parts View



## Clean and Clear® Plus Cartridge Filter Parts List

### Replacement Parts

Item No.	Part No.	Description
1	190058	Pressure Gauge, with Indicator
2	98209800	High Flow Manual Air Relief Valve (HFMARV)
3	178616	Compression Spring
4	170026	Top Manifold, 240 C&C Plus
4	170027	Top Manifold, 320/420/520 C&C Plus
5	R173572	Cartridge Element, 240 C&C Plus, 4 req.
5	R174573	Cartridge Element, 320 C&C Plus, 4 req.
5	R173576	Cartridge Element, 420 C&C Plus, 4 req.
5	R173578	Cartridge element, 520 C&C Plus, 4 req.
6	170030	Air Bleed Tube Assy., 240 C&C Plus
6	170029	Air Bleed Tube Assy., 320 C&C Plus
6	170028	Air Bleed Tube Assy., 420 C&C Plus
6	178583	Air Bleed Tube Assy., 520 C&C Plus
7	170040	Bottom Manifold
8	39010200	O-ring, Tank Clamp (.470 O.D.)
9	190003	Clamp Band Replacement Kit
10	195610	Clamp Washer, Small I.D.
11	195611	Clamp Washer, Large I.D.
12	194997	Clamp Nut
13	195612	Clamp Spring, 4-Coil
14	190039	Baffle Assy., C&C Plus
15	98960311	Union Kit, Black
15	271096	2" Valve Adapter Kit, 1 ½ in. x 2 in. (set), White
15	270004	2" Valve Adapter Kit, 1 ½ in. x 2 in. (set), Black
15	274426Z	2 x 2.5" Valve Adapter Kit,

Item No.	Part No.	Description
16	170036	Pipe Assy. Outlet, C&C Plus
17	190143	O-ring, Drain
18	190030	Drain Plug, without O-Ring
19	170023	Tank, Lid Assy., 240 C&C Plus
19	170024	Tank, Lid Assy., 320 C&C Plus
19	178581	Tank, Lid Assy., 420 C&C Plus
19	178582	Tank, Lid Assy., 520 C&C Plus
20	178578	Tank, Bottom Assy. (Includes Items 7, 14, 16 and 18)
21	86006900	O-ring
22	195339	Ring, Steel Back-up
-	192019	Drain Plug Wrench
-	171013	Label Kit w/ Air Relief, 240 C&C Plus
-	171014	Label Kit w/ Air Relief, 320/420/520 C&C Plus
-	190106Z	Air Bleed Screen Cap

**(-) Not Shown**





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P/N 178558 Rev. P 7/6/17



# HI-FLOW™


## SIDE MOUNTED BACKWASH VALVE

IMPORTANT SAFETY INSTRUCTIONS  
*READ AND FOLLOW ALL INSTRUCTIONS*  
SAVE THESE INSTRUCTIONS


### TABLE OF CONTENTS

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**WARNING** Before installing this product, read and follow all warning notices and instructions accompanying this valve. Failure to follow safety warning and instructions can result in severe injury, death, or property damage. Call (800) 831-7133 for additional free copies of these instructions.

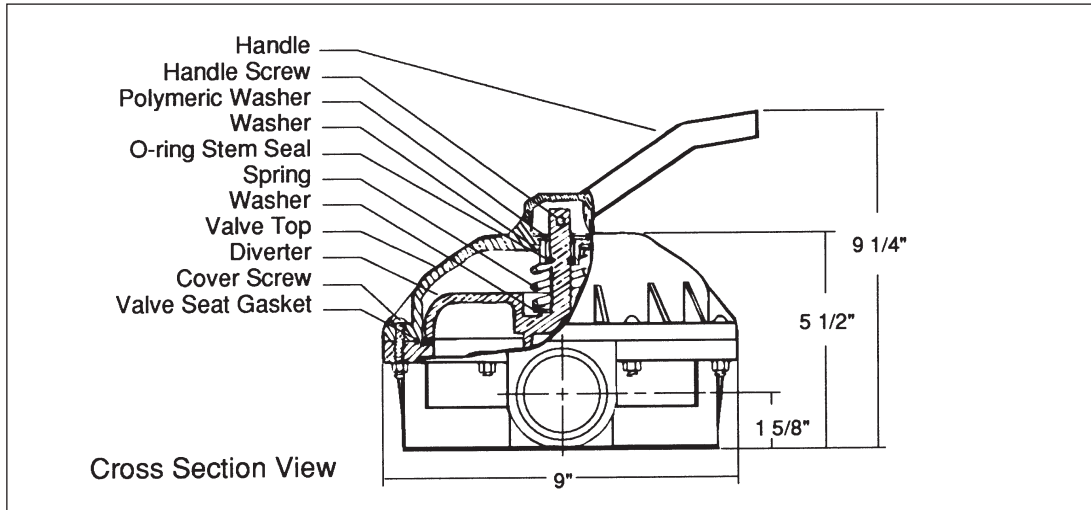
**IMPORTANT NOTICE!**  
 Attention Installer: This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

**DANGER** The valve must be installed by a qualified serviceman in accordance with the National Electrical Code and all applicable local codes and ordinances.

 Always disconnect power to the equipment at the circuit breaker before servicing any of the equipment. Ensure that the disconnected circuit is locked out or properly tagged so that it cannot be switched on while you are working on the equipment. Failure to do so could result in serious injury or death to serviceman, operator users or others due to electric shock.  
Position the filter and the air relief valve to safely direct water drainage and purged air or water. Water discharged from an improperly positioned filter or valve can create an electrical hazard that can cause severe personal injury as well as damage property.

**CAUTION** **For Installation of Electrical Controls at Equipment Pad (ON/OFF Switches, Timers and Automation Load Center)**

 Install all electrical controls at equipment pad, such as on/off switches, timers, and control systems, etc. to allow the operation (startup, shut-down, or servicing) of any pump or filter so the user does not place any portion of his/her body over or near the pump strainer lid, filter lid or valve closures. This installation should allow the user enough space to stand clear of the filter and pump during system start-up, shut down or servicing of the system filter.



**WARNING**



**FILTER OPERATES UNDER HIGH PRESSURE.**

When any part of the circulating system, (e.g., clamp, pump, filter, valve(s), etc.), is serviced, air can enter the system and become pressurized. Pressurized air can cause the lid to separate which can result in severe injury, death, or property damage. To avoid this potential hazard, follow these instructions:

1. Before repositioning valve(s) and before beginning the assembly, disassembly, or adjustment of the clamp or any other service of the circulating system: (A) Turn the pump **OFF** and **shut OFF** any automatic controls to ensure the system is NOT inadvertently started during the servicing; (B) open the manual air relief valve; (C) wait until all pressure is relieved.
2. Whenever installing the filter clamp **FOLLOW THE FILTER CLAMP 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., clamp, pressure gauge, valve(s), o-rings, etc].
5. Be sure that the filter is properly mounted and positioned according to instructions provided.

## Valve Positions Overview

SETTING	FLOW PATH Function
Filter	<b>Pump &gt; Sand Top / DE Bottom &gt; Through Filter &gt; DE Top / Sand Bottom &gt; Return</b> For normal filter action and vacuuming pool thru filter.
Backwash	<b>Pump &gt; DE Top / Sand Bottom &gt; Through Filter &gt; Sand Top / DE Bottom &gt; Waste</b> For cleaning filter by reversing flow
Rinse	<b>Pump &gt; DE Top / Sand Bottom &gt; Through Filter &gt; DE Top / Sand Bottom &gt; Waste</b> For start-up cleaning and resetting filter bed after backwashing
Waste	<b>Pump &gt; Waste</b> For vacuuming directly to waste, lowering pool level or draining pool
Closed	<b>No Circulation - DO NOT USE THIS SETTING WITH PUMP OPERATING!</b>
Recirculate	<b>Pump &gt; Return</b> For circulating water without going through filter

## Valve Installation

**CAUTION** This valve is available in two models for use with sand type or diatomaceous earth (DE) type pool filters. Be sure that you have the correct model for your filter. Installing the incorrect model may cause your pump to dead head, or drain the pool when in backwash position.

1. Confirm correct valve is being used; DE valves for DE filters and Sand valves for Sand filters.
2. Install valve to filter by securing bulkhead nuts on valve to fittings on the filter.

**CAUTION** Tighten the nuts by hand only! No additional tightness is required.

3. Plumb pump piping to center pipe in valve.
4. Plumb return and waste lines.

## Winterizing

1. Drain and winterize pump and filter per manufacturer's instructions.
2. Depress valve handle and rotate so pointer on handle is between any two settings.

## Replacement of Valve Top and Diverter Assembly

1. Set valve handle in any setting.
2. Remove cover screws.
3. Lift off valve top and diverter assembly.
4. Install new valve top and diverter assembly. Be sure arrows on valve top and bottom are aligned.
5. Tighten cover screws evenly and alternately. Do not over tighten.

## Complete Disassembly

1. Remove Handle to diverter screw. Note arrow on top of diverter stem as handle is removed.
2. Evenly and alternately loosen cover screws.

**CAUTION** Top is under spring load. Loosen all screws before removing any of them.

3. Remove cover screws and valve top.
4. Note location of O-ring and spring, and number of washers on diverter stem. Remove O-Ring, spring and washers.
5. Re-assemble in reverse order.

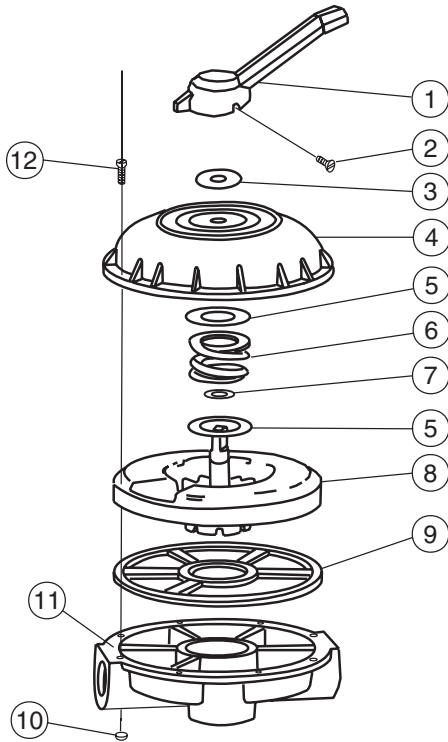
**Note:** Prior to assembly, be sure bottom gasket and diverter sealing surface are clean and free from nicks to insure positive sealing.

6. When replacing valve handle, be sure arrow on diverter stem and pointer on handle are pointed in the same direction.

**CAUTION** DO NOT over tighten the screws or use motorized screwdrivers; as this can cause damage to the threads.

## Technical Data

### Replacement Parts



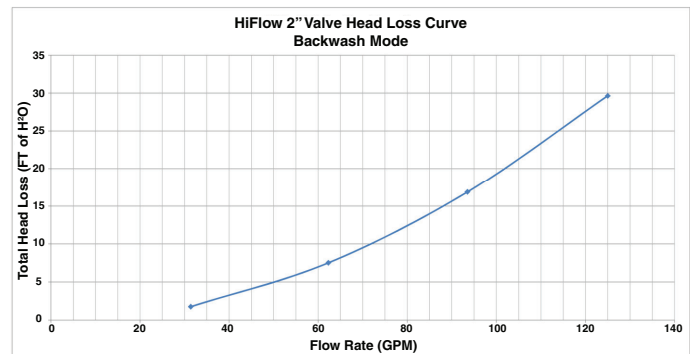
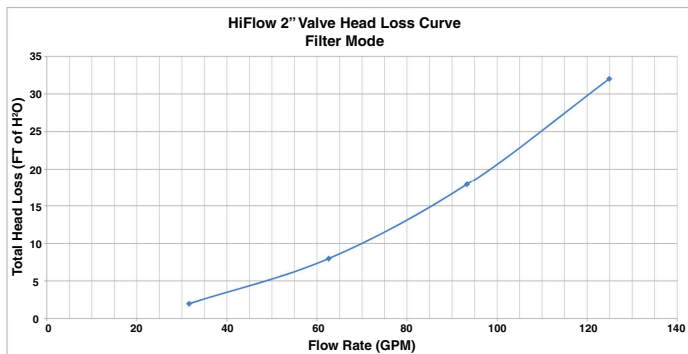
Covers Assemblies P/Ns 261049, 261050 and 261142

Item	P/N	Description	Qty.
1	272520	Handle	1
2	272405	Screw - Handle	1
3	272402	Washer, Plastic	1
4	272412	Valve Top	1
5	271193	Washer - 18 GA	2
6	272400	Spring - Compression	1
7	272406	O-ring - Diverter	1
8	272413Z	Diverter	1
9	272409	Seal -Diverter	1
10	98211400	Nut - 1/4" - 20 Hex	8
11	272415	Plat - 2" Valve Bottom	1
12	272403	Screw - 1/4" - 20	8
*	272422	Valve Top Assembly	1

\*This part number includes items 1 thru 9

**Note:** When replacing gasket P/N 272409, secure it to valve bottom with an instant cyanoacrylate adhesive suitable for bonding rubber to plastic.

### Head Loss Curves



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P/N 272133 REV. G 11/28/18



# SPABRITE® & AQUALIGHT® UNDERWATER LIGHT

## INSTALLATION GUIDE



**IMPORTANT SAFETY INSTRUCTIONS**  
*READ AND FOLLOW ALL INSTRUCTIONS*  
**SAVE THESE INSTRUCTIONS**

### Table of Contents

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### **DANGER**



#### **Risk of Electrical Shock or Electrocution**

This underwater light must be installed by a licensed or certified electrician in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installer, or others due to electrical shock, and may also cause damage to property. Read and follow the specific instructions below.

### **WARNING**

Before installing this underwater light, read and follow all warning notices and instructions accompanying this light. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage. Call (800) 831-7133 for additional free copies of these instructions.

### **Important Notice**



Attention Installer.

This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

**⚠ DANGER! Risk of Electrical Shock or Electrocution!**



This product must be installed by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death --- or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to property. Always disconnect the power to the pool light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to serviceman, pool users or others due to electrical shock. **READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL.**

**⚠ WARNING — Important Safety Information for Pentair Niche and Light Installation**

- All Niche and Light installations must conform with all codes. If local codes mandate a cord seal, use Pentair plastic niches (P/N 79206600 and P/N 79206700).
- Under no circumstances replace lights by splicing wire under water or behind niche.

**⚠ WARNING — RISK OF ELECTRIC SHOCK AND INJURY.**

**USE ONLY THE INSTALLATION METHOD SPECIFIED BELOW.**

**Important Safety Information for Fountain Fixture Installations**

Location of Luminaire (Light) Use	Pentair Fountain Fixture* (P/N 560000 – P/N 560001) (P/N 560002 – P/N 560003)	Required Installation Method
Swimming Pool or Spa	Wet-Niche Swimming Pool (or Spa) Luminaire (Light)	Fixture Housing (Forming Shell) ONLY. <b>DO NOT USE</b> Fountain Fixture Stand.
Fountain	Wet-Niche Submersible Swimming Pool (or Spa) Luminaire (Light)	Fixture Housing (Forming Shell) or Fountain Fixture Stand.

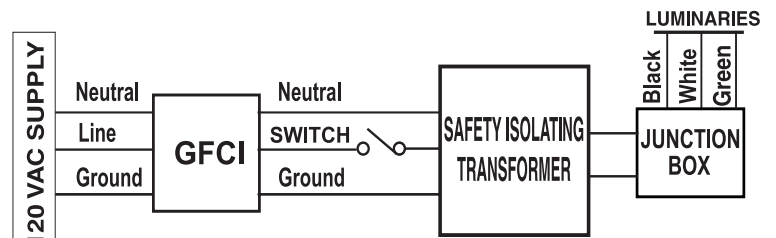
**(\*) Note:** Wet-niche luminaires complying with requirements for both uses may bear both the Listed Wet-Niche Swimming Pool (or Spa) Luminaire UL Mark and the Listed Wet-Niche Submersible Luminaire UL Mark. A luminaire not bearing the corresponding UL Listing Mark is not considered by UL to have been produced under UL's Listing and Follow-Up Service for the associated usage location.

**⚠ WARNING — THE LIGHT LENS MAY GET HOT WHEN IN USE. USERS SHOULD AVOID CONTACT WITH THE LIGHT AS SERIOUS BURNS MAY RESULT FROM PROLONGED CONTACT WITH THE LIGHT.**

**Before Installing luminaries read the following:**

**⚠ WARNING!** Always install a new lens gasket (see part number in User's Guide), when ever reassembling the light. Failure to do so may permit water to leak into the assembly which could cause; (a) an electrical hazard resulting in death or serious injury to pool users, installer, or others due to electrical shock, or (b) breakage of the lamp or lens, which likewise could result in serious injury to pool user, installers, or bystanders, or in damage to property. **REPLACE ANY CRACKED PROTECTIVE SHIELD (CRACKED LENS) WITH NEW LENS AND GASKET.**

- FOR 12 VAC LUMINARIES: ALWAYS USE A SEPARATE SAFETY ISOLATION TRANSFORMER TO POWER LUMINARIES. See diagram on right. Note: Connect all three (or two wires) wires to the corresponding circuit wires in the Junction Box (black wire to power, white wire to common, and green wire to ground (for a 3-wire light).



NOTE: FOR 120 VAC ILLUMINARIES, ISOLATION TRANSFORMER IS INCLUDED IN LIGHT FIXTURE.

- 12 VAC LUMINARIES SPECIFICATION:  
120VAC , 50/60 Hz

**Luminaires not suitable for direct mounting on normally flammable surfaces (suitable ONLY for mounting on non-combustible surfaces.**



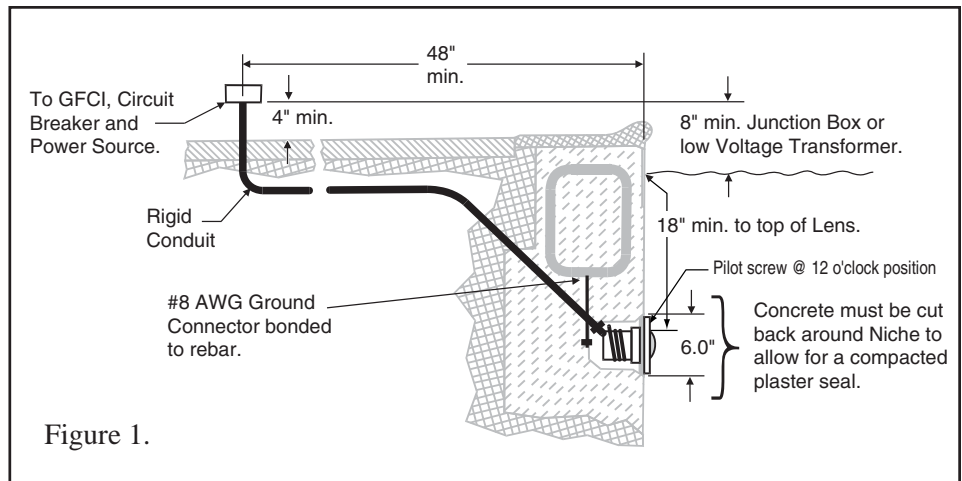
## Section I. Installing light fixture during new pool construction

A. The electrician must complete preparatory steps before light fixture is installed; see Figure 1.

1. Ensure that the pool meets the requirements of the current National Electrical Code and all local codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements before the underwater light is installed.

Some of the requirements of the National Electrical Code which the pool's electrical system must meet are as follows:

- a. The lighting circuit must have a Ground Fault Circuit Interrupter (GFCI), and must have an appropriately rated circuit breaker.
- b. The Junction Box (or, for 12 volt models, the low voltage transformer) must be located at least eight (8) inches above water level, at least four (4) inches above ground level, and at least 48 inches from the edge of the pool; see Figure 1.
- c. The light fixture and all metal items within five (5) feet of the pool must be properly electrically bonded.
- d. The wet niche must be properly installed so the pilot screw hole is at the 12 o'clock position and that the top edge of the underwater light's lens is at least 18 inches below the surface of the water in the pool; see Figure 1.



### NOTE

The required orientation of all Pentair lights is with the pilot screw at the 12 o'clock position. This is guaranteed by proper niche installation.

- e. The wet niche must be properly electrically bonded and grounded via the No. 8 AWG ground connector located at the rear of the niche; see Figure 1.

### NOTE

The pool or spa electrical system can be verified with a Pool and Spa Electrical Qualification Test kit. The test kit is available from Pentair Water Pool and Spa, Inc. The electrical system inspection using this kit must be performed by trained and certified personnel.

2. To be certain that the pool's electrical system meets all applicable requirements, the electrician should also consult the local building department.
3. Use only Pentair Aquatic Systems wet niches to insure proper bonding and grounding connections.

B. Steps to perform after the electrical system requirements are met.

1. Feed cord through conduit to Junction box, leaving at least four (4) feet of cord at the light fixture to coil around the light; see Figure 1. This four (4) feet of cord around the light allows the light to be serviced after the pool is filled with water.
2. Cut the cord at the Junction Box, leaving at least six (6) inches of cord to make connections.
3. Strip six (6) inches of the outer cord jacket to expose the three insulated wires. Be careful not to damage the insulation on the three (3) inner wires.
4. Connect all three (3) wires to the corresponding circuit wires in the Junction Box, and secure the Junction Box cover in place.
5. For lights with 2-conductor cords only (no ground wire) connect two wires to the corresponding circuit wires in the Junction Box, black wire to power, white wire to common and secure the Junction Box cover in place.

### **⚠ WARNING**

Never operate this underwater light for more than 10 seconds unless it is totally submerged in water. Without total submersion, the light assembly will get extremely hot, which may result in serious burns or in breakage of the lamp or lens. This may result in serious injury to pool users, installers, or bystanders, or in damage to property.

6. Replace the light assembly into niche and tighten special pilot screw.

## **WARNING**

Use only the special pilot screw provided with this underwater light. This screw mounts and electrically grounds the housing securely to the mounting ring and wet niche. Failure to use the screw provided could create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock.

7. Fill the pool until the underwater light is completely submerged in water before operating the light for more than 10 seconds. Turn on main switch or circuit breaker, as well as the switch which operates the underwater light itself, to check for proper operation.

## **Section II. Replacing light fixture in existing pool**

### **DANGER**

#### **Risk of Electrical Shock or Electrocution**



This underwater light must be installed by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to property.

Always disconnect the power to the pool light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to serviceman, pool users or others due to electrical shock.

#### **A. Before replacing the light fixture.**

1. Verify that the pool meets the requirements of the current National Electrical Code and all local codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements before the underwater light is installed. Some of the requirements of the National Electrical Code which the pool's electrical system must meet are as follows:
  - a. The lighting circuit must have a Ground Fault Circuit Interrupter (GFCI), and must have an appropriately rated circuit breaker.
  - b. The Junction Box (or, for 12 volt models, the low voltage transformer) must be located at least 8 inches above ground or water level, at least four (4) inches above ground level, and at least 48 inches from the edge of the pool; see Figure 1.
  - c. The light fixture and all metal items within 5 feet of the pool must be properly electrically bonded.
  - d. The wet niche must be properly installed so that the top edge of the underwater light's lens is at least 18 inches below the surface of the water in the pool; see Figure 1.
  - e. The wet niche must be properly electrically bonded and grounded via the No. 8 AWG ground connector located at the rear of the niche; see Figure 1.

#### **NOTE**

The pool or spa electrical system can be verified with a Pool and Spa Electrical Qualification Test Kit. The test kit is available from Pentair Aquatic Systems. The electrical system inspection using this kit must be performed by trained and certified personnel.

2. To be certain that the pool's electrical system meets all applicable requirements, the electrician should also consult the local building department.
3. Use only Pentair Aquatic System wet niches to insure proper bonding and grounding connections.

#### **B. Replacing the light fixture after electrical system requirements are met.**

### **WARNING**

Failure to bring the pool's electrical system up to code requirements before installing the underwater light will create an electrical hazard which could result in death or serious injury to pool users, installers, or others due to electrical shock, and may also cause damage to property.

1. Turn off main electrical switch or circuit breaker, as well as the switch which operates the underwater light itself.
2. To remove the light assembly, remove the special pilot screw at top of the face ring, remove the light assembly from the niche, and place the assembly on the deck.

## **WARNING**

Be sure to keep the special pilot screw from this underwater light. This screw mounts and electrically grounds the housing securely to the mounting ring and wet niche. Failure to use the screw provided could create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock.

3. Remove Junction Box cover, disconnect the light fixture wires, and pull the cord through the conduit.
4. Feed the new light fixture cord through the conduit from the niche to the Junction Box.

## **NOTE**

Depending on the length of the conduit, special tools may be required to pull the cord through the conduit.

5. Leave at least 4 feet of cord to coil around the light fixture; see Figure 1. This 4 feet of cord coiled around the light allows the light to be serviced after the pool is filled with water.
6. Cut the cord at the Junction Box, leaving at least 6 inches of cord to make connections.
7. Strip 6 inches of the outer cord jacket from the cord to expose the three insulated wires--be careful not to damage the insulation on the three inner wires.
8. Connect all three wires to the corresponding circuit wires in the Junction Box, black wire to power, white wire to common, and green wire to ground, and secure the Junction Box cover in place.

## **WARNING**

Use only the special pilot screw provided with this underwater light. This screw mounts and electrically grounds the housing securely to the mounting ring and wet niche. Failure to use the screw provided could create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock.

9. Replace light assembly into niche and tighten special pilot screw.

## **WARNING**

Never operate this underwater light for more than 10 seconds unless it is totally submerged in water. Without total submersion, the light assembly will get extremely hot, which may result in serious burns or in breakage of the lamp or lens. This may result in serious injury to pool users, installers, or bystanders, or in damage to property.

10. Fill the pool until the underwater light is completely submerged in water before operating the light for more than 10 seconds. Turn on main switch or circuit breaker, as well as the switch which operates the underwater light itself, to check for proper operation.

### **Section III. Replacing a lamp only**

## **DANGER**



Always disconnect power to the pool light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to installer, serviceman, pool users or others due to electrical shock.

- A. Turn off main electrical switch or circuit breaker, as well as the switch which operates the underwater light itself.
- B. You will need the following items:
  1. A new lens gasket (part number 79108600).
  2. A lamp, refer to Table 1 for the correct type and wattage.

## **WARNING**

Replace lamp with a similar type and wattage. Failure to replace lamp with the same type of lamp will damage the light assembly and may cause an electrical hazard resulting in death or serious injury to pool users, installers, or others due to electrical shock, and may also cause damage to property.

## **WARNING**

Always install a new lens gasket (part number 79108600) whenever disassembling the light. Failure to do so may permit water to leak into the assembly which could cause:

- (a) An electrical hazard resulting in death or serious injury to pool users, installers, or others due to electrical shock.; or,
- (b) breakage of the lamp or lens, which likewise could result in serious injury to pool users, installers, or bystanders, or in damage to property.

- C. To remove light assembly, remove the special pilot screw at top of face ring, remove light assembly from niche, and place assembly on deck.

## ⚠ WARNING

Be sure to keep the special pilot screw from this underwater light. This screw mounts and electrically grounds the housing securely to the mounting ring and wet niche. Failure to use the screw provided could create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock.

- D. Disassemble light fixture and remove bulb. Remove and discard old gasket.
- E. Install new gasket during reassembly of light, Pentair Water Pool and Spa part number 79108600.
- F. Select the replacement bulb from Table 1.
1. For AquaLight of 100 watt and 250 watt; see Figures 2-3.
  2. Squeeze wire form at rounded ends until the wire comes together and forms a diamond shape opening; see Figures 2-3.

### Lamp Specifications:

### 12\* volt Models

120 volt - 250 watt - T-4 lamp**	75 watt
120 volt - 100 watt - T-4 lamp**	100 watt
120 volt - 60 watt - PAR 16 lamp***	*Transformer required
12 volt - 100 watt - R-20 lamp***	
12 volt - 75 watt - MR-16 lamp**	

### 120 volt Models

** AquaLight - *** SpaBrite Table 1.	60 watt, 100 watt 250 watt
---	-------------------------------

## IMPORTANT

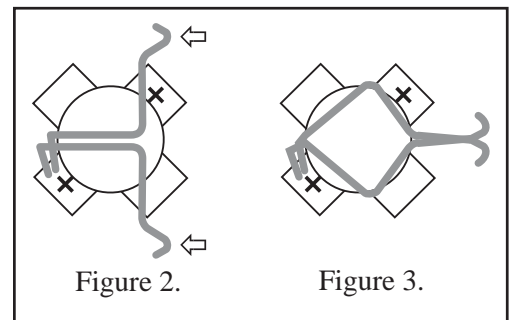
Be careful not to touch bulb with bare skin, as this will reduce the life of the bulb. Use the plastic wrapping of the new bulb, or a cloth to grasp the bulb.

3. While holding wire form in diamond shape, insert bulb through diamond opening and thread bulb into socket.

## ⚠ WARNING

Never operate the underwater light for more than 10 seconds unless it is totally submerged in water. Without total submersion, the light assembly will get extremely hot and may result in serious burns or in breakage of the lamp or lens. This may result in serious injury to pool users, installers, or bystanders, or in damage to property.

4. With the light resting on its base, place the gasket on top of the light shell. A NEW LENS GASKET MUST BE USED EACH TIME THE LIGHT IS REASSEMBLED. Locate the word "TOP" on the lens surface. Align the pilot screw on the face ring with the letter "O" in the word "TOP" and the arrow on the label marked, "Arrow on this label must line up with the pilot screw on the face ring."
  5. The semi-assembled light will now include the face ring and its new gasket properly aligned with the light shell. Place this light upside down on the old gasket, using the old gasket as an assembly fixture. This will keep the lens and gasket assembly from being pushed out of the face ring while you secure it to the light fixture.
- G. Secure the face ring to the light fixture. Sealing screws must be tightened in the following manner to ensure a proper seal.
1. For lights with chrome or brass face ring:
    - a. Partly tighten the screw at the 3 o'clock position, and then partly tighten the screw at the 9 o'clock position. Partly tighten the screw at another 'opposite' position, and then partly tighten the screw directly across from it.
    - b. Continue partly tightening all screws in the above sequence until all screws are evenly and securely tightened. Recommended 20 inch pounds torque.
  2. For lights with stainless steel face ring:
    - a. With the bent ends of the circular unitension clamp pointing down spread the clamp and place it in the "U" recesses of the locking levers. Ensure that the bent ends of the clamp are located between the pair of locking levers as shown in Figure 4, location A. Check to see that the clamp is properly engaged with all of the levers; see Figure 4.
    - b. Hold the ends of the unitension clamp together. Insert the bolt through one end of the bend end and then insert the other end through the other bent end and thread the bolt into the nut. Using a #3 Phillips head screwdriver tighten the screw and nut until the distance between the ends of the clamp equals ¼ inch or less, see Figure 5.

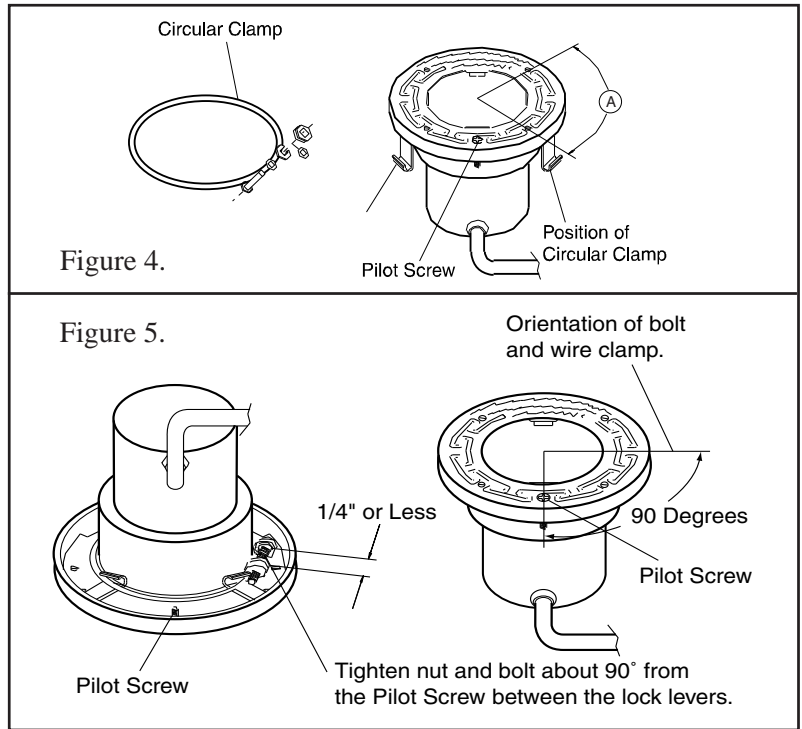


H. Replace the light assembly into the niche and tighten the special pilot screw.

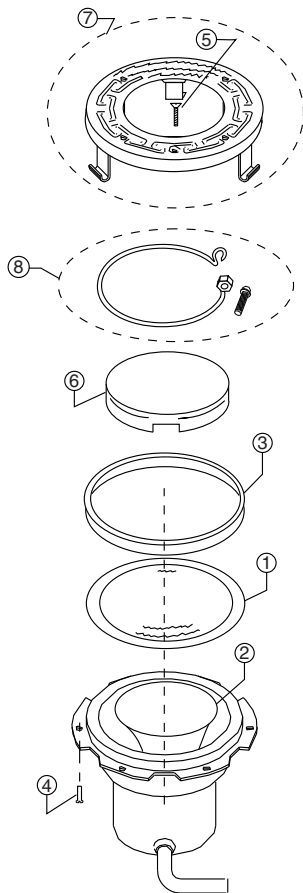
**⚠ WARNING**

Use only the special pilot screw provided with this underwater light. This screw mounts and electrically grounds the housing securely to the mounting ring and wet niche. Failure to use the screw provided could create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock.

I. Fill pool until the underwater light is completely submerged in water before operating the light for more than 10 seconds. Turn on main switch or circuit breaker, as well as the switch which specifically operates the underwater light, to check for proper operation.



**Section IV. Replacement Parts**



Item No.	Part No.	Description
1	79107800	Lens, clear, 4 in. dia., tempered (12 volt SpaBrite, 120 volt / 12 volt AquaLight)
1	650086	Lens, clear, 4 in. dia., tempered (120 volt SpaBrite only)
2	650139Z	Bulb, 60W, 120VAC, PAR16 (SpaBrite)
2	79108100	Floodlamp, med. base, 100 watt, 12 volt, (SpaBrite)
2	79102900	100 watt halogen quartz screw base, (AquaLight)
2	79113800	250 watt halogen quartz screw base, (AquaLight)
2	79112400	Bulb, 75 watt, 12 volt, bi-pole, (AquaLight)
2	070517	Bulb, 100 watt, 120 volt, bayonet, (AquaLight)
2	79112700	Bulb, 250 watt, 120 volt, bayonet, (AquaLight)
3	79108500	Gasket, 4 in. dia. lens (12 volt SpaBrite only)
3	79108600	Gasket, silicone, 100 watt, 250 watt (AquaLight and 120 volt SpaBrite)
4	98208600	Screw, S/S 10-24 x 3/8 in., 6 required, for chrome-brass
5	79104800	Pilot Screw with captive gum washer, brass
5	619355	Pilot Screw with captive gum washer, S/S
6	79108900	Kwik-change color lens, red
6	79109000	Kwik-change color lens, blue
6	650015	Kwik-change color lens, magenta
6	650016	Kwik-change color lens, purple
6	650017	Kwik-change color lens, teal
6	650018	Kwik-change color lens, green
6	650019	Kwik-change color lens pack (5 colors)
7	79111600	Face Ring assy, S/S
8	79210400	Uni-tension wire assy., S/S with welded nut

**SAVE THESE INSTRUCTIONS**



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# LÁMPARA SUBACUÁTICA SPABRITE™ / AQUALIGHT™

## Manual del Propietario

**IMPORTANTES INSTRUCCIONES DE SEGURIDAD**  
*LEA Y SIGA TODAS LAS INSTRUCCIONES*  
**GUARDE ESTAS INSTRUCCIONES**



### Índice

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### PELIGRO



#### Riesgo de choque eléctrico o electrocución

Esta lámpara subacuática debe ser instalada por un electricista con certificado de aptitud con el Código Eléctrico Nacional (EE. UU.) y todos los códigos y reglamentos locales respectivos. La instalación inadecuada creará un riesgo eléctrico que podría resultar en la muerte o en lesiones graves a los usuarios de la piscina, a los instaladores o a otras personas debido a un choque eléctrico, y también podría causar daños a la propiedad. Lea y siga las instrucciones específicas que aparecen abajo.

### ADVERTENCIA

Antes de instalar esta lámpara subacuática, lea y siga todas las advertencias e instrucciones adjuntas. No apegarse a los avisos de seguridad y a las instrucciones pudiera ocasionar una lesión grave, la muerte o daños a la propiedad. Favor de llamar al (805) 553-5000 para obtener ejemplares gratuitos de estos instructivos.

### AVISO IMPORTANTE



Para información del instalador.

Este manual contiene información importante sobre la instalación, operación y uso en forma segura de este producto. Esta información debe dársele al dueño(a)/operador(a) de este equipo.

**⚠ ¡PELIGRO! ¡Riesgo de Golpe Eléctrico o Electrocuación!**



Este producto debe ser instalado por un electricista certificado o licenciado o por un representante de servicio de mantenimiento de piscinas calificado de acuerdo con el Código Nacional de Electricidad y todas las regulaciones y códigos locales aplicables. Una instalación inapropiada creará un peligro eléctrico que podría resultar en muerte — o lesiones graves a los usuarios de la piscina, instaladores u otras personas debido a un golpe eléctrico y puede causar daño a la propiedad. Siempre desconecte la fuente de poder de las luces de la piscina en la caja de fusibles antes de realizar un servicio de mantenimiento de las luces. El no hacerlo de esta forma puede resultar en la muerte o lesiones serias al representante de servicios de mantenimiento, usuarios de la piscina u otros debido a un golpe eléctrico. LEA Y SIGA TODAS LAS INSTRUCCIONES DE ESTE MANUAL.

**⚠ ADVERTENCIA —**

**Importante información de seguridad para la instalación de luces y nichos Pentair**

- Todas las instalaciones de nichos y luces deben estar en conformidad con todos los códigos. Si un código local exige un sello para cable, utilice nichos plásticos Pentair (P/N 79206600 y P/N 79206700).
- Por ningún motivo reemplace luces empalmando cables bajo el agua o detrás del nicho.

**⚠ ADVERTENCIA —**

**RIESGO DE GOLPE ELÉCTRICO Y LESIONES.**

UTILICE SOLO EL MÉTODO DE INSTALACIÓN ESPECIFICADO MÁS ABAJO.

**Importante información de seguridad para instalaciones de reflectores de fuentes**

Lugar de uso de Lámpara (Luz)	Reflector de Fuente Pentair* (P/N 560000 – P/N 560001) (P/N 560002 – P/N 560003)	Método de Instalación Requerido
Piscina o Spa	Lámpara (Luz) para Piscina (o Spa) con nicho impermeables fuente.	SÓLO carcasa de reflector (Casco de molde). <b>NO UTILIZAR</b> Soporte para reflector de
Fuente	Lámpara (Luz) para Piscina (o Spa) con nicho impermeable sumergible	Carcasa para reflector (Casco de molde) o soporte para reflector de fuente.

(\*) **Nota:** Las lámparas de nicho impermeable que cumplen con los requisitos para ambos usos, pueden llevar ya sea la marca de certificación UL para Lámparas listadas para piscinas (Spa) de nicho impermeable, como la marca de certificación UL para Lámparas listadas de nicho impermeable sumergible. Una Lámpara que no lleva la marca de Listado UL correspondiente, no es considerada por UL como fabricada bajo el Listado y Servicio de Seguimiento UL para el lugar de uso asociado.


**⚠ ADVERTENCIA —**

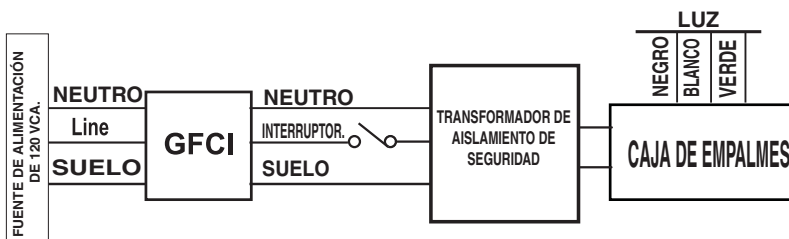
**El lente de la luz pueden calentarse durante su uso. Los usuarios deben evitar contacto con la luz como quemaduras graves pueden resultar del contacto prolongado con el LUZ.**

**⚠ ¡ADVERTENCIA!** Siempre instale una nueva lente la junta (ver el número de pieza en la Guía de usuario), cuando nunca montar la luz. De no hacerlo, podría permitir fugas de agua en la asamblea general, que podría causar; (a) el peligro de descarga eléctrica que provoca la muerte o lesiones graves a la piscina los usuarios, instalador, o a otras personas debido a una descarga eléctrica, o (b) rotura de la lámpara o del cristalino, que también podría resultar en lesiones graves para usuario grupo, instaladores, o de las personas, o daños a la propiedad.

**SUSTITUIR LAS ROTURAS PROTECTOR DE LALENTE (FISURAS) CON UNA NUEVALENTE Y LA EMPAQUETADURA. • PARA 12**

**VAC luminarias:** UTILIZAR SIEMPRE UN TRANSFORMADOR DE AISLAMIENTO DE SEGURIDAD DE luminarias. Vea el diagrama a la derecha. Nota: Conecte los tres (o dos cables) los cables de los cables del circuito correspondiente en la caja de conexión (cable negro al poder, cable blanco en común, y el cable verde a tierra (para una luz de 3 cables).

•12 VCA luminarias ESPECIFICACIÓN:  
120 VCA , 50/60 Hz



## Sección I. Instalación del accesorio para lámpara durante la construcción de una piscina nueva.

A. Antes de instalar el accesorio portalámparas, el electricista debe haber completado los siguientes pasos de preparación, ver la figura 1.

1. Verifique que la piscina cumpla con todos los requisitos del Código Eléctrico Nacional vigente y con todos los códigos y reglamentos locales. Antes de instalar la luz subacuática, un electricista con certificado de aptitud debe instalar el sistema eléctrico para que cumpla o sobrepase dichos requisitos. Algunos de los requisitos del Código Eléctrico Nacional que debe satisfacer el sistema eléctrico de la piscina son los siguientes.

- a. El circuito de alumbrado debe tener un interruptor de circuito de pérdida a tierra (*Ground Fault Circuit Interrupter, GFCI*), y un disyuntor clasificado correctamente.
- b. La caja de conexiones (o, para los modelos de 12 voltios, el transformador de bajo voltaje) debe estar colocada al menos a 20 centímetros (8 pulgadas) sobre el nivel del agua y debe estar colocada al menos a 10 centímetros (4 pulgadas) sobre el nivel de tierra al menos un metro veintidós centímetros (48 pulgadas) del borde de la piscina, vea la figura 1.
- c. El sujetador de la lámpara y todos los artículos metálicos que estén a menos de 1.5 metros (5 pies) de distancia tienen que estar unidos eléctricamente en la forma correcta.
- d. El nicho en húmedo debe estar correctamente instalado de manera que el tornillo piloto se encuentre en la posición de las 12 del reloj y que el borde superior del lente de la lámpara subacuática se encuentre a un mínimo de 45.7 cm (18 pulgadas) por debajo de la superficie del agua de la piscina; vea la figura 1.

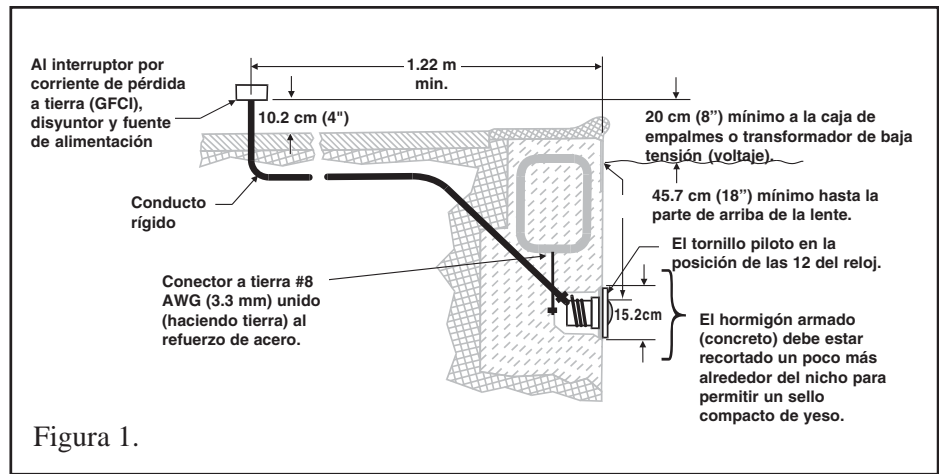


Figura 1.

### NOTA

La orientación requerida para todas las lámparas Pentair es con el tornillo piloto en la posición de las 12 del reloj. Esto es garantizado por la instalación correcta del nicho.

- e. El nicho mojado está unido eléctricamente en la forma correcta y conectado a tierra a través del conector a tierra Núm. 8 AWG (3.3 mm) ubicado en la parte trasera del nicho, vea la figura 1.

### NOTA:

El sistema eléctrico de la piscina o bañera de hidromasaje (spa) se puede verificar con un Pool and Spa Electrical Qualification Test Kit (Juego de Prueba para Calificar Piscinas y Bañeras de Hidromasaje). Puede obtener este estuche para pruebas en Pentair Aquatic Systems. La inspección del sistema eléctrico utilizando el juego arriba indicado tiene que realizarse por personal certificado y capacitado para ello.

2. Para estar seguro de que el sistema eléctrico de la piscina satisface todos los requisitos aplicables, el electricista también deberá consultar al departamento de construcciones de la localidad.
3. Use únicamente los nichos para inmersión en el agua de Pentair Water Pool and Spa para cerciorarse de que la unión eléctrica y la conexión a tierra queden exactas.

B. Pasos que deben realizarse después de haber satisfecho los requisitos del sistema eléctrico.

1. Pasar el cordón a través del tubo para paso de cables eléctricos a la caja de conexiones, dejar un mínimo de 1.22 metros (4 pies) de cable en el portalámparas para enrollar alrededor de la luz; ver figura 1. Este metro y veintidós centímetros (4 pies) de cable alrededor de la luz permitirán darle servicio cuando la piscina ya esté llena de agua.
2. Corte el cordón en la caja de empalmes, dejando por lo menos 15 cm (6 pulgadas) de cordón para hacer las conexiones.
3. Pele 15 cm (6 pulgadas) de la punta de la envoltura externa del cordón para poner al descubierto los tres alambres aislados — tenga cuidado de no dañar el aislante de los tres alambres internos.
4. Conecte los tres alambres a los hilos de conexión correspondientes en el circuito de la caja de conexiones y asegure la tapa de dicha caja en su lugar.
5. Para luces con 2-los conductores (sin cable de puesta a tierra) conecte dos cables a los cables del circuito correspondiente en la caja de empalmes, el cable negro a la toma eléctrica, cable blanco común y seguro de la cubierta de la caja de empalmes en el lugar.

### ⚠ ADVERTENCIA

Nunca encienda esta lámpara subacuática durante más de 10 segundos a menos que esté completamente sumergida en el agua. Si la lámpara no está totalmente sumergida, el conjunto de sus componentes se pondrá sumamente caliente, lo cual podría causar quemaduras graves o la rotura de la lámpara o lente. Esto a su vez podría causar lesiones graves a los usuarios de la piscina, a los instaladores, a las personas que se encuentren cerca o en daños a la propiedad.

6. Vuelva a colocar los componentes de la lámpara en el nicho y apriete el tornillo piloto especial de acero inoxidable.

## **ADVERTENCIA**

Use solamente el tornillo guía especial proporcionado con esta lámpara subacuática. Este tornillo monta y conecta eléctricamente a tierra en forma segura la cubierta protectora al aro de montaje y al nicho para inmersión en agua. No usar el tornillo provisto podría ocasionar un peligro eléctrico que pudiera resultar en la muerte o lesión grave de los usuarios de la piscina, instaladores u otros debido a un choque eléctrico.

7. Llene la piscina hasta que la lámpara subacuática quede completamente sumergida en el agua antes de encender la luz durante más de 10 segundos. Encienda el interruptor principal o el disyuntor, así como también el interruptor que hace funcionar la lámpara subacuática, para verificar que esté funcionando adecuadamente.

## **Sección II. Cambio del portalámparas en una piscina ya instalada**

### **PELIGRO**

#### **Riesgo de choque eléctrico o electrocución**



Esta lámpara subacuática debe ser instalada por un electricista con certificado de aptitud con el Código Eléctrico Nacional (EE. UU.) y todos los códigos y reglamentos locales respectivos. La instalación inadecuada creará un riesgo eléctrico que podría resultar en la muerte o en lesiones graves a los usuarios de la piscina, a los instaladores o a otras personas debido a un choque eléctrico, y también podría causar daños a la propiedad.

Siempre desconecte la corriente eléctrica de la luz de la piscina en el disyuntor antes de darle servicio a la lámpara. El no hacerlo podría resultar en la muerte o en lesiones graves a la persona que esté dando servicio, a los usuarios de la piscina o a otras personas debido a un choque eléctrico.

A. Antes de cambiar el portalámparas:

1. Verifique que la piscina satisfaga los requisitos del Código Eléctrico Nacional vigente y todos los códigos y reglamentos de la localidad. Antes de instalar la lámpara subacuática, un electricista con certificado de aptitud debe instalar el sistema eléctrico para que cumpla o sobrepase dichos requisitos. Algunos de los requisitos del Código Eléctrico Nacional que el sistema eléctrico de la piscina tiene que cumplir son los siguientes.
  - a. El circuito de luz debe tener un interruptor del circuito de pérdida de tierra (*Ground Fault Circuit Interrupter, GFCI*), y tener un disyuntor clasificado correctamente.
  - b. La caja de conexiones (o, para los modelos de 12 voltios, el transformador de bajo voltaje ) debe estar colocada al menos a 20 centímetros (8 pulgadas) sobre el nivel del agua y debe estar colocada al menos a 10 centímetros (4 pulgadas) sobre el nivel de tierra al menos un metro veintidós centímetros (48 pulgadas) del borde de la piscina, ver figura 1.
  - c. El portalámparas y todos los artículos metálicos deben estar a menos de 1.5 metros (5 pies) de distancia de la piscina y deben estar unidos eléctricamente en la forma correcta.
  - d. El nicho para inmersión en agua está colocada en la piscina al menos a 45.7 cm (18 pulgadas) del borde superior del lente de la lámpara subacuática por debajo de la superficie del agua. Ver figura #1.
  - e. El nicho está unido eléctricamente en la forma correcta y conectado a tierra a través del conector a tierra Núm. 8 AWG ubicado en la parte trasera del nicho, ver figura 1.

### **NOTA:**

El sistema eléctrico de la piscina o bañera de hidromasaje (spa) se puede verificar con un Pool and Spa Electrical Qualification Test Kit (Juego de Prueba para Calificar Piscinas y Bañeras de Hidromasaje). Estuche para efectuar Pruebas Este estuche para prueba se puede obtener en Pentair Aquatic Systems. La inspección del sistema eléctrico utilizando el juego arriba indicado tiene que realizarse por personal certificado y capacitado para ello.

2. Para estar seguro de que el sistema eléctrico de la piscina satisface todos los requisitos aplicables, el electricista también deberá consultar al departamento de construcciones de la localidad.
3. Para cerciorares de que la unión eléctrica y la conexión a tierra queden correctas se deben usar únicamente nichos para inmersión en agua de Pentair Aquatic Systems.

B. Cambio del accesorio para lámpara después de cumplir con los requisitos del sistema eléctrico.

 **ADVERTENCIA**

No asegurarse de que el sistema eléctrico de la piscina cumpla con los requisitos vigentes del código antes de instalar la lámpara subacuática creará un peligro eléctrico que podría resultar en la muerte o en una lesión grave de los usuarios de la piscina, instaladores, u otras personas debido a un choque eléctrico, y también podría causar daños a la propiedad.

1. Apague el interruptor eléctrico principal o el disyuntor, así como también el interruptor que opera la lámpara subacuática.
2. Para quitar los componentes de la lámpara, quite el tornillo guía especial en la parte superior del aro de la carátula, saque los componentes de la lámpara del nicho y colóquelos en la cubierta de la piscina.

 **ADVERTENCIA**

Asegúrese de guardar el tornillo guía especial de esta lámpara subacuática. Este tornillo monta y conecta eléctricamente a tierra en forma segura la cubierta protectora al aro de montaje y al nicho para inmersión en agua. No usar el tornillo proporcionado podría ocasionar un peligro eléctrico que pudiera ocasionar e la muerte o una lesión grave a los usuarios de la piscina, instaladores u otros debido a un choque eléctrico.

3. Quite la cubierta de la caja de conexiones, desconecte los cables del portalámparas y tire el cable a través del tubo para paso de cables eléctricos.
4. Pase el nuevo cable del portalámparas por el tubo para paso de cables eléctricos desde el nicho hasta la caja de conexiones.

**NOTA:**

Dependiendo de la longitud del tubo para paso de cables eléctricos, pudieran requerirse herramientas especiales para jalar el cable.

5. Dejar un mínimo de 1.22 metros (4 pies) de cable para enrollar alrededor de la luz; ver figura #1. Este metro y veintidós centímetros (4 pies) de cable alrededor de la luz permitirán darle servicio cuando la piscina ya esté llena de agua.
6. Corte el cable en la caja de conexiones, deje al menos 15 cm (6 pulgadas) de cordón para hacer las conexiones.
7. Pele 15 cm (6 pulgadas) de la punta de la envoltura externa del cordón para poner al descubierto los tres alambres aislados — tenga cuidado de no dañar el aislante de los tres alambres internos.
8. Conecte los tres alambres a los hilos de conexión correspondientes en el circuito de la caja de conexiones y asegure la tapa de dicha caja en su lugar. (El alambre negro a la fuente de alimentación, el blanco al común de masa y el verde a tierra) y fije la tapa de la caja de empalmes en su lugar.

 **ADVERTENCIA**

Use solamente el tornillo guía especial proporcionado con esta lámpara subacuática. Este tornillo monta y conecta eléctricamente a tierra en forma segura la cubierta protectora al aro de montaje y al nicho para inmersión en agua. No usar el tornillo provisto podría ocasionar un peligro eléctrico que pudiera resultar en la muerte o lesión grave de los usuarios de la piscina, instaladores u otros debido a un choque eléctrico.

9. Vuelva a colocar los componentes de la lámpara y apriete el tornillo guía especial.

 **ADVERTENCIA**

Nunca encienda esta lámpara subacuática por más de 10 segundos a menos que esté completamente sumergida en el agua. Si la lámpara no está totalmente sumergida, el conjunto de sus componentes, se pondrá sumamente caliente, lo cual podría causar quemaduras graves o la rotura de la lámpara o lente. Esto a su vez podría causar lesiones graves a los usuarios de la piscina, a los instaladores, a las personas que se encuentren cerca o en daños a la propiedad.

10. Antes de encender la luz por más de 10 segundos, debe llenar la piscina hasta que la lámpara subacuática quede completamente sumergida. Encienda el interruptor principal o el disyuntor, así como también el interruptor que hace funcionar la lámpara subacuática, para verificar que esté funcionando adecuadamente.

### Sección III. Cambio de la bombilla (foco) únicamente

#### **⚠ PELIGRO**



Siempre desconecte la corriente eléctrica de la luz de la piscina en el disyuntor antes de darle servicio a la lámpara. El no hacerlo podría resultar en la muerte o en lesiones graves al instalador, a la persona que esté dando servicio, a los usuarios de la piscina o a otras personas debido a un choque eléctrico.

1. Siempre apague el interruptor eléctrico principal o el disyuntor, así como también el interruptor que opera la lámpara subacuática.
2. Se necesita lo siguiente:
  - a. Un empaque nuevo para lente (número de parte 79108600).
  - b. Un foco, consultar el cuadro #1 para saber cual es el tipo y la potencia en vatios adecuados.

#### **Especificaciones de la lámpara**

120 voltios - 250 vatios - T-4 lámp\*\*  
120 voltios - 100 vatios - T-4 lámp\*\*  
120 voltios - 60 vatios - PAR 16 lámp\*\*\*  
12 voltios - 100 vatios - R-20 lámp\*\*\*  
12 voltios - 75 vatios - MR-16 lámp\*\*

\*\* AquaLight - \*\*\*SpaBrite  
Tabla 1.

#### **Modelos de 12\* voltios**

75 vatios  
100 vatios  
\*Se requiere transformador

#### **Modelos de 120 voltios**

60 vatio, 100 vatios  
250 vatios

#### **⚠ ADVERTENCIA**

Reemplace la lámpara por otra que sea del tipo y la potencia en voltios similar. Si no reemplaza la lámpara con otra del mismo tipo pudiera dañar sus componentes y podría causar un peligro eléctrico que pudiera ocasionar la muerte o lesiones graves a los usuarios de la piscina, instaladores, u otras personas debido a un choque eléctrico, y también podría causar daños a la propiedad.

#### **⚠ ADVERTENCIA**

Siempre que desarme la luz, póngale un empaque nuevo a la lente (número de parte 79108600) cada vez que desarme la luz. No hacerlo pudiera permitir la entrada el agua a los componentes, lo cual pudiera ocasionar:

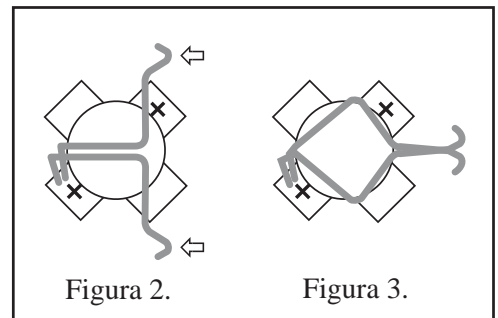
- (a) un peligro eléctrico que podría resultar en la muerte o en una lesión seria a los usuarios de la piscina, instaladores u otras personas debido a un choque eléctrico, o
- (b) la ruptura de la lámpara o lente que, en forma similar, podría resultar en una lesión seria a los usuarios de la piscina, lo que a su vez instaladores, personas cercanas, o daños a la propiedad.

3. Para quitar los componentes de la lámpara, quite el tornillo guía especial en la parte superior del aro de la carátula, saque los componentes de la lámpara del nicho y colóquelos en la cubierta de la piscina.

#### **⚠ ADVERTENCIA**

Asegúrese de guardar el tornillo guía especial de esta lámpara subacuática. Este tornillo monta y conecta eléctricamente a tierra en forma segura la cubierta protectora al aro de montaje y al nicho para inmersión en agua. No usar el tornillo proporcionado podría ocasionar un peligro eléctrico que pudiera ocasionar la muerte o una lesión grave a los usuarios de la piscina, instaladores u otros debido a un choque eléctrico.

4. Desarmar los componentes de la lámpara y quitar el foco (bombilla). Quite y deseche el empaque viejo (junta).
5. Instale el empaque nuevo al armar de nuevo la luz, el número de parte de Pentair Water Pool and Spa es el 79108600.
6. Seleccione el foco (bombilla) del cuadro 1.
  - a. Para la AquaLight de 100 vatios y de 250 vatios, vea las figuras 2 y 3.
  - b. Apriete el alambre formado como lo indican, vea la figura 3, hasta que el alambre se junte y forme una abertura en forma de diamante, vea la figura 3.
  - c. Mientras mantiene el alambre formando un diamante, vea la figura 3, inserte la bombilla a través de la abertura en forma de diamante y enrósquela en el portalámparas (zócalo).
  - d. Cerciórese de no tocar la bombilla con las manos desnudas, pues como lo indican reducirá la vida de la bombilla.



## ADVERTENCIA

Nunca encienda esta lámpara subacuática por más de 10 segundos a menos que esté completamente sumergida en el agua. Si la lámpara no está totalmente sumergida, el conjunto de sus componentes se pondrá sumamente caliente, lo cual podría causar quemaduras graves o la rotura de la lámpara o lente. Esto pudiera ocasionar lesiones graves a los usuarios de la piscina, a los instaladores, a las personas que se encuentren cerca o daños a la propiedad.

6. Fije el aro al lámpara. Los tornillos de sellado deben apretarse de la siguiente manera para asegurarse de un sellado adecuado;
  - a. Para las lámparas con carátula con aro de cromo o latón:
    - (1) Apriete parcialmente el tornillo que está en el lugar correspondiente a las 3 horas en punto y, después, apriete parcialmente el que se encuentra en la posición de las 9 horas. Apriete parcialmente el tornillo en otra posición «opuesta» y después apriete parcialmente el tornillo que está directamente al lado contrario del mismo.
    - (2) Continúe apretando parcialmente todos los tornillos en la secuencia de arriba hasta que todos los tornillos estén apretados en forma pareja y segura. (Se recomienda un par de torsión de 20 libras [9 kilos].)
  - b. Para las lámparas carátula con aro de acero inoxidable:

Coloque el tornillo y la tuerca a aproximadamente a 45 grados a la derecha del tornillo guía especial de acero inoxidable y de la tuerca en la abrazadera de unitensión hasta que la distancia entre las puntas de la abrazadera sea igual a 6 mm (1/4 de pulgada).

Vea los instructivos adjuntos para el armado del aro de carátula de acero inoxidable en la página 15.
7. Vuelva a colocar el conjunto de la lámpara en el nicho y apriete el tornillo piloto especial de acero inoxidable.

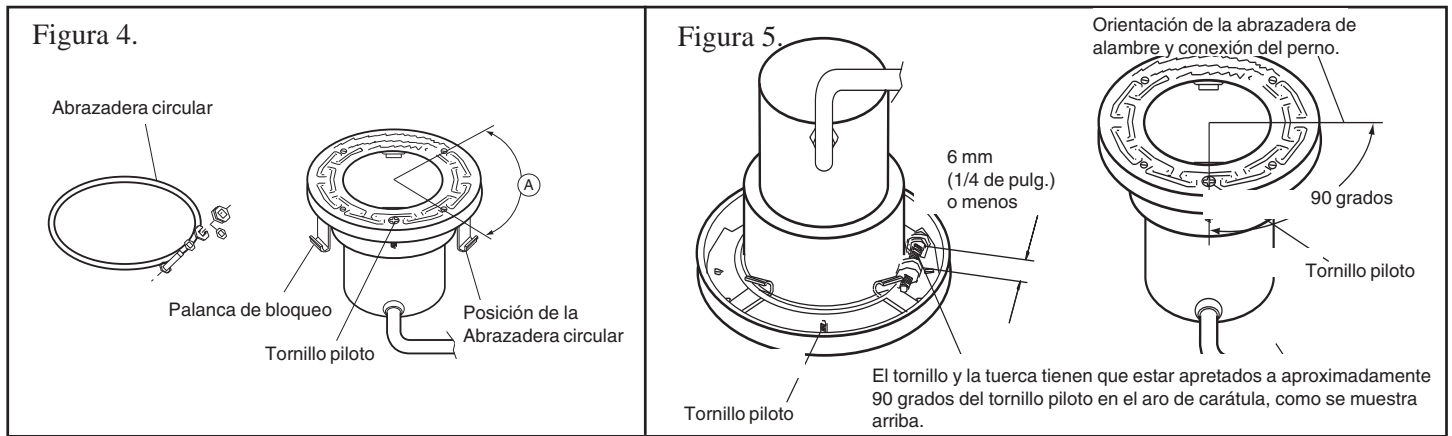
## ADVERTENCIA

Use solamente el tornillo piloto especial de acero inoxidable suministrado con esta lámpara subacuática. Este tornillo monta y conecta el bastidor a tierra en forma segura conectándolo al aro de montaje y al nicho mojado. El no usar el tornillo provisto podría causar un peligro eléctrico que a su vez podría resultar en la muerte o lesión grave de los usuarios de la piscina, instaladores u otros debido a un choque eléctrico.

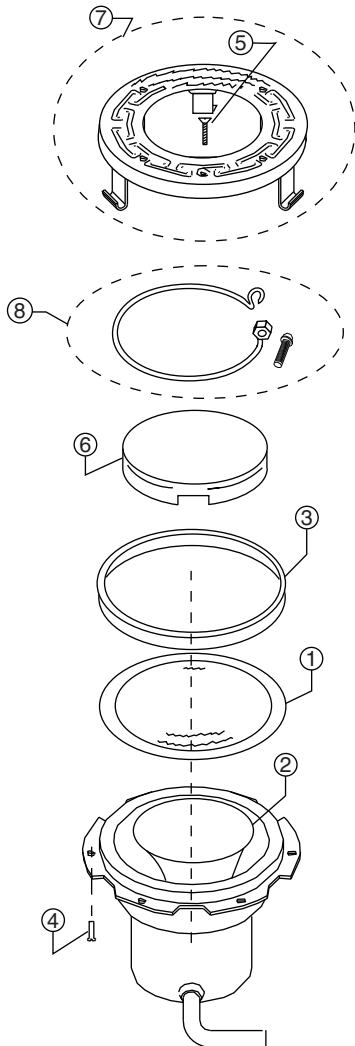
8. Llene la piscina hasta que la lámpara subacuática quede completamente sumergida en el agua antes de encender la luz durante más de 10 segundos. Encienda el interruptor principal o el disyuntor, así como también el interruptor de la lámpara subacuática, para verificar que esté funcionando adecuadamente.

### Instrucciones para el armado del aro de carátula de acero inoxidable.

1. Con la luz descansando sobre la base, coloque el encima del armazón de la luz, como se muestra. (Vea la figura 4.) **SE TIENE QUE USAR UN SE DEBE USAR UN EMPAQUE NUEVO PARA LA LENTE CADA VEZ QUE SE VUELVE A MONTAR LA LÁMPARA.** Localizar la palabra “TOP” en la superficie de la lente. Alinear el tornillo guía en la carátula del aro que tenga la letra “O” de la palabra “TOP” y la flecha de la etiqueta marcada, “La flecha en esta etiqueta debe tiene que estar alineada con el tornillo piloto en el aro de carátula.”
  - a. La luz semimontada ahora incluirá la carátula del aro y su nuevo empaque alineado con el armazón de la luz. Mantenga la lámpara hacia abajo sobre el empaque viejo, y usar éste como dispositivo para armar. Esto evitará que la lente y el empaque sean empujados fuera de la carátula del aro mientras es asegurado al portalámparas.
  - b. Con las puntas dobladas de la abrazadera circular de unitensión apuntando hacia abajo, abra la abrazadera y colóquela en las ranuras en «U» de las palancas de bloqueo. Cerciórese de que las puntas dobladas de la abrazadera estén ubicadas entre el par de palancas de bloqueo como se muestra en la figura 4, ubicación A. Verifique que la abrazadera esté empotrada adecuadamente con todas las palancas. Vea la figura 5.
  - c. Voltee la luz de tal manera que ahora esté descansando sobre la lente. Apriete el tornillo y la tuerca hasta que la distancia entre las puntas de la abrazadera sea igual a 6.4 mm (1/4 de pulgada) o menos (figura 5).



#### Sección IV. Desglose de las partes



Artículo No.	No. del Repuesto	Descripción
1	79107800	Lente, transparente, de 10 cm. (4 pulgadas) de diámetro, templada (12 voltios SpaBrite, 120 voltios / 12 voltios AquaLight)
1	650086	Lente, transparente, de 10 cm. (4 pulgadas) de diámetro, templada (120 voltios SpaBrite)
2	650139Z	Bombilla (foco), 60 vatios, 120 voltios, PAR 16, (SpaBrite)
2	79108100	Proyector, base med., 100 vatios, 12 voltios, (SpaBrite)
2	79102900	Base para atornillar de cuarzo halógeno de 100 vatios, (AquaLight)
2	79113800	Base para atornillar de cuarzo halógeno de 250 vatios, (AquaLight)
2	79112400	Bombilla (foco), 75 vatios, 12 voltios, bipolar, (AquaLight)
2	070517	Bombilla (foco), 100 vatios, 120 voltios, bayoneta
2	79112700	Bombilla (foco), 250 vatios, 120 voltios, bayoneta (AquaLight)
3	79108500	Empaque, lente de 10 cm (4 pulg.) de diámetro (12 voltios SpaBrite)
3	79108600	Empaque, silicona, 100 vatios, 250 vatios (AquaLight, 120 voltios SpaBrite)
4	98208600	Tornillo, acero inoxidable de 10-24 x 3/8 pulg. (9 mm), se necesitan 6, para latón-cromo
5	79104800	Tornillo guía con arandela de caucho cautiva, latón
5	619355	Tornillo guía con arandela de caucho cautiva, acero inoxidable
6	79108900	Lente de color Kwik-change, roja
6	79109000	Lente de color Kwik-change, azul
6	650015	Lente de color Kwik-change, magenta
6	650016	Lente de color Kwik-change, púrpura
6	650017	Lente de color Kwik-change, azul/verde
6	650018	Lente de color Kwik-change, verde
6	650019	Lente de color Kwik-change, paquete (5 colores)
7	79111600	Conjunto del aro de carátula, acero inoxidable
8	79210400	Conjunto del alambre de unitensión, de acero inoxidable con tuerca soldada

**GUARDE ESTAS INSTRUCCIONES**



# NOTICE D'EMPLOI DES LAMPES IMMERGÉES SPABRITE® ET AQUALIGHT®

## CONSIGNES DE SÉCURITÉ IMPORTANTES PRIÈRE DE LIRE ET D'OBSERVER TOUTES LES CONSIGNES CONSERVER CETTE NOTICE



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### DANGER



#### Risque de choc électrique ou d'électrocution

Cette lampe immergée doit obligatoirement être installée par un électricien agréé ou breveté conformément au Code national de l'électricité et à tous les codes et ordonnances locaux applicables. Une installation incorrecte risque de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique et pouvant également entraîner des dégâts matériels. Prière de lire et d'observer les directives spécifiques ci-dessous.

### AVERTISSEMENT

Avant d'installer cette lampe immergée de Pentair Water Pool and Spa, prière de lire et de suivre tous les avertissements et instructions qui l'accompagnent. Toute infraction aux consignes de sécurité et d'emploi risque de provoquer blessures graves, décès ou dégâts matériels. Pour obtenir des exemplaires gratuits, prière de s'adresser au fournisseur local ou d'appeler Pentair Water Pool and Spa au (805) 553-5000.

### Avis important



À l'attention de l'installateur.

La présente notice contient des renseignements importants sur l'installation, le fonctionnement et l'utilisation de ce produit en toute sécurité. Prière de fournir ces informations au propriétaire et (ou) à l'opérateur de ce matériel.

## **DANGER! Risque de décharge électrique ou d'électrocution!**



Ce produit doit être installé par un électricien agréé ou qualifié ou un technicien spécialisé, conformément au Code National d'Electricité et à tous les codes et règlements locaux en vigueur. Toute mauvaise installation crée un danger électrique pouvant causer la mort ou des blessures graves - par décharge électrique - aux utilisateurs, aux installateurs ou à des tiers, et pouvant également provoquer des dégâts matériels. Avant de commencer l'entretien du luminaire, veuillez toujours couper le courant électrique du luminaire au niveau du disjoncteur. Le non-respect de cette consigne peut entraîner la mort ou des blessures graves par décharge électrique pour le technicien, les utilisateurs ou des tiers. **VEUILLEZ LIRE ET OBSERVER TOUTES LES CONSIGNES DE CE GUIDE.**

### **AVERTISSEMENT — Importantes consignes de sécurité pour l'installation du luminaire et de la niche Pentair**

- Toutes les installations de niche et de luminaire doivent être faites conformément à tous les codes. Si les codes locaux exigent un joint d'étanchéité à cordon, veuillez utiliser les niches en plastique Pentair (P/N 79206600 et P/N 79206700).
- Ne tenter en aucun cas de remplacer les luminaires en épissant les câbles sous l'eau ou derrière la niche.

### **AVERTISSEMENT — RISQUE DE DÉCHARGE ÉLECTRIQUE OU DE BLESSURE. UTILISEZ UNIQUEMENT LA MÉTHODE D'INSTALLATION SPÉCIFIÉE CI-DESSOUS.**


#### **Importantes consignes de sécurité pour l'installation d'un appareil d'éclairage pour fontaine**


Emplacement/Utilisation du Luminaire (lumière)	Luminaire pour Fontaine Pentair* (P/N 560000 – P/N 560001) (P/N 560002 – P/N 560003)	Méthode d'Installation Requise
Piscine ou spa	Luminaire (lumière) pour niche étanche pour piscine (ou spa)	Bâti de luminaire (coque) SEULEMENT. <b>NE PAS UTILISER</b> le support pour fontaine.
Fontaine	Luminaire (lumière) pour niche submersible de pour piscine (ou spa)	Bâti de luminaire (coque) ou support luminaire pour fontaine.

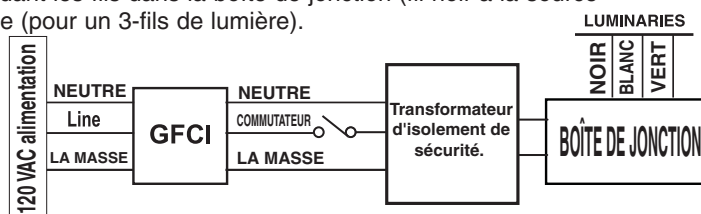
(\***Remarque** : Les luminaires pour niches étanches se conformant aux règlements pour les deux applications peuvent porter la marque UL listée pour les luminaires pour niches étanches pour piscine (ou spa) ainsi que pour les luminaires pour niches submersibles. Un luminaire ne portant pas la marque UL listée correspondante n'est pas considéré comme ayant été produit conformément aux normes de la marque UL listé et au service de suivi de la production UL pour cet emplacement.

### **AVERTISSEMENT — La lumière peut devenir chaud pendant l'utilisation. Les utilisateurs doivent éviter contact avec la lumière comme Burns sérieuse peut résulter d'un contact prolongé avec la lumière.**

#### **IMPORTANT : Le câblage luminaires - Lire la suite**

 **AVERTISSEMENT !** Toujours installer une nouvelle lentille joint (voir numéro de référence du Guide de l'utilisateur), quand jamais du remontage de la lumière. Le défaut de le faire peut permettre l'eau de s'écouler dans l'assemblée qui pourrait causer: (a) un risque électrique entraînant la mort ou des blessures graves pour les utilisateurs piscine, installation, ou d'autres, en raison d'un choc électrique, ou (b) rupture de la lampe ou de la lentille, qui de même risque d'entraîner des blessures graves pour l'utilisateur piscine, installateurs, ou des passants, ou des dommages à la propriété. **Remplacer tout fissuré PROTECTION (FISSURÉ LENTILLE)** avec nouvelle lentille et le joint. Pour 12 VCA luminaires : Toujours utiliser un transformateur de séparation de sécurité D'ALIMENTATION DE luminaires. Voir bouton droit sur la droite. Remarque : Brancher tous les trois (ou deux fils) les fils vers le circuit correspondant les fils dans la boîte de jonction (fil noir à la source d'alimentation, fil blanc en commun, et le fil vert à la masse (pour un 3-fils de lumière).

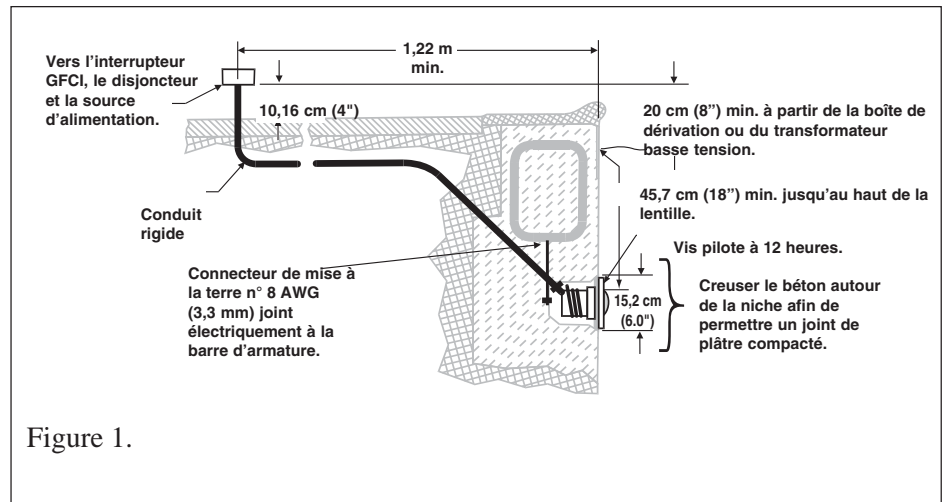
12 VAC LUMINARIES SPECIFICATION:  
120 VAC  , 50/60 Hz



## Section I. Installation de l'appareil d'éclairage lors de la construction d'une nouvelle piscine

A. Avant que l'appareil d'éclairage ne puisse être installé, l'électricien devra procéder aux préparatifs suivants, cf. figure 1 ci-dessous.

1. S'assurer d'abord que la piscine est conforme aux spécifications courantes du Code national de l'électricité et de tous les codes et ordonnances locaux. Avant que la lampe immergée ne puisse être installée, il faut qu'un électricien agréé ou breveté installe un circuit électrique qui soit conforme à ces spécifications ou qui les dépasse. Certaines des spécifications du Code national de l'électricité applicables aux circuits électriques des piscines sont indiquées ci-dessous. Vérifier ainsi que :
  - a. Le circuit d'éclairage comporte un interrupteur à détection de courant de terre (GFCI) et un disjoncteur du calibre approprié.
  - b. La boîte de dérivation (ou, pour les modèles de 12 volts, le transformateur basse tension) est située à au moins 20 cm (8 pouces) au-dessus du niveau du sol et à au moins 1,22 m (48 pouces) du bord de la piscine, cf. figure 1 ci-dessous.
  - c. L'appareil d'éclairage et tous les éléments métalliques situés à moins de 1,5 m (5 pieds) de la piscine comportent des joints électriques appropriés.
  - d. La niche submersible doit être installée convenablement, de telle manière que le trou de la vis soit à 12 heures et que le rebord supérieur de la lentille du luminaire soit à une profondeur d'au moins 45,7 cm (18 pouces) au-dessous de la surface de l'eau dans la piscine, cf. figure 1 ci-dessous.



### REMARQUE

La position requise de tous les luminaires Pentair est d'avoir la vis pilote à 12 heures. Ceci est garanti par l'installation correcte de la niche.

- e. La niche immergée comporte des joints électriques appropriés et est convenablement reliée à la terre au moyen du connecteur de terre n° 8 AWG (3,3 mm) situé à l'arrière de la niche, cf. figure 1.

### REMARQUE :

Le circuit électrique peut être vérifié au moyen d'un kit d'essai de qualification électrique pour piscines et bains tourbillon, kit disponible auprès de Pentair Aquatic Systems. L'inspection du circuit au moyen du kit en question doit être réalisée par un personnel breveté et bien formé.

2. Pour s'assurer que le circuit électrique de la piscine est conforme à toutes les spécifications applicables, l'électricien devra aussi consulter le service de construction local.
  3. Pour réaliser une connexion à la terre et des joints électriques satisfaisants, n'utiliser que des niches immergées de Pentair Aquatic Systems.
- B. Une fois le circuit électrique installé conformément aux spécifications, procéder comme suit :
1. Acheminer le cordon à travers le conduit jusqu'à la boîte de dérivation en laissant au moins 1,22 m (4 pieds) à enrouler autour de la lampe au niveau de l'appareil d'éclairage, cf. figure 1. Ce mètre vingt-deux permet de procéder au remplacement de la lampe une fois la piscine remplie d'eau.
  2. Couper le cordon au niveau de la boîte de dérivation en laissant au moins 15 cm (6 pouces) pour les raccordements.
  3. Couper la gaine extérieure du cordon sur 15 cm (6 pouces) afin de mettre à nu les trois conducteurs internes isolés en veillant à ne pas endommager leur isolement.
  4. Raccorder les trois conducteurs aux fils correspondants du circuit électrique dans la boîte de dérivation et refermer solidement le couvercle de cette dernière.

## **AVERTISSEMENT**

À moins qu'elle ne soit totalement immergée dans l'eau, ne jamais utiliser cette lampe pendant plus de 10 secondes, car elle atteindrait alors des températures excessives susceptibles de provoquer des brûlures graves ou de casser l'ampoule ou la lentille et d'entraîner par là des blessures graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes, ou encore des dégâts matériels.

5. Remettre l'ensemble lampe dans la niche et serrer la vis de guide spéciale en acier inoxydable.

## **AVERTISSEMENT**

N'utiliser que la vis de guide spéciale en acier inoxydable livrée avec cette lampe immergée. Cette vis fixe solidement le logement à la bague de montage et à la niche immergée et assure la mise à la terre. L'emploi de toute autre vis risque de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique.

6. Ne pas utiliser la lampe pendant plus de 10 secondes avant que la piscine ne soit suffisamment remplie pour que la lampe soit totalement immergée dans l'eau. Mettre alors en marche l'interrupteur ou le disjoncteur principal ainsi que l'interrupteur de commande de la lampe afin d'en vérifier le bon fonctionnement.

## **Section II. Remplacement de l'appareil d'éclairage d'une piscine existante**

### **DANGER**

#### **Risque de choc électrique ou d'électrocution**



Cette lampe immergée doit obligatoirement être installée par un électricien agréé ou breveté ou par un technicien qualifié dans la maintenance des piscines conformément au Code national de l'électricité et à tous les codes et ordonnances locaux applicables. Une installation incorrecte risque de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique et pouvant également entraîner des dégâts matériels.

Sous peine de provoquer le décès ou des blessures graves pour le préposé à l'entretien, les utilisateurs de la piscine ou d'autres personnes par suite d'un choc électrique, veiller à toujours déconnecter la lampe de la piscine du secteur au niveau du disjoncteur avant de procéder au remplacement de la lampe.

#### **A. Avant de remplacer l'appareil d'éclairage.**

1. S'assurer d'abord que la piscine est conforme aux spécifications courantes du Code national de l'électricité et de tous les codes et ordonnances locaux. Avant que la lampe immergée ne puisse être installée, il faut qu'un électricien agréé ou breveté installe un circuit électrique qui soit conforme à ces spécifications ou qui les dépasse. Certaines des spécifications du Code national de l'électricité applicables aux circuits électriques des piscines sont indiquées ci-dessous. Vérifier ainsi que :
  - a. Le circuit d'éclairage comporte un interrupteur à détection de courant de terre (GFCI) et un disjoncteur du calibre approprié.
  - b. La boîte de dérivation (ou, pour les modèles de 12 volts, le transformateur basse tension) est située à au moins 20 cm (8 pouces) au-dessus du niveau du sol et à au moins 1,22 m (48 pouces) du bord de la piscine, cf. figure 1.
  - c. L'appareil d'éclairage et tous les éléments métalliques situés à moins de 1,5 m (5 pieds) de la piscine comportent des joints électriques appropriés.
  - d. La niche immergée est correctement installée de manière à ce que le bord supérieur de la lentille de la lampe soit à au moins 45,7 cm (18 pouces) au-dessous de la surface de l'eau dans la piscine, cf. figure 1.
  - e. La niche immergée comporte des joints électriques appropriés et est convenablement reliée à la terre au moyen du connecteur de terre n° 8 AWG (3,3 mm) situé à l'arrière de la niche, cf. figure 1.

#### **REMARQUE :**

Le circuit électrique peut être vérifié au moyen d'un kit d'essai de qualification électrique pour piscines et bains tourbillon, kit disponible auprès de Pentair Water Pool and Spa, Inc. L'inspection du circuit au moyen du kit en question doit être réalisée par un personnel breveté et bien formé.

2. Pour s'assurer que le circuit électrique de la piscine est conforme à toutes les spécifications applicables, l'électricien devra aussi consulter le service de construction local.
3. Pour réaliser une connexion à la terre et des joints électriques satisfaisants, n'utiliser que des niches immergées de Pentair Aquatic Systems.

- B. Pour remplacer l'appareil d'éclairage une fois le circuit électrique installé conformément aux spécifications, procéder comme suit.

### **AVERTISSEMENT**

Avant d'installer la lampe immergée, veiller à rendre le circuit électrique de la piscine conforme aux spécifications du code, car on risquerait autrement de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique, et entraîner également des dommages matériels.

1. Mettre à l'arrêt l'interrupteur ou le disjoncteur principal ainsi que l'interrupteur de commande de la lampe immergée.
2. Pour retirer l'ensemble lampe, ôter la vis de guide spéciale en acier inoxydable située au sommet de la bague avant, retirer l'ensemble de la niche et le placer sur la plate-forme.

### **AVERTISSEMENT**

Veiller à conserver la vis de guide spéciale en acier inoxydable de cette lampe immergée. Cette vis fixe solidement le logement à la bague de montage et à la niche immergée et assure la mise à la terre. L'emploi de toute autre vis risque de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique.

3. Enlever le couvercle de la boîte de dérivation, débrancher les fils électriques de l'appareil d'éclairage et tirer le cordon à travers le conduit.
4. Acheminer le cordon du nouvel appareil à travers le conduit depuis la niche jusqu'à la boîte de dérivation.

### **REMARQUE :**

Selon la longueur du conduit, il se pourrait que l'on ait besoin d'outils spéciaux pour tirer le cordon à travers le conduit.

5. Laisser au moins 1,22 m (4 pieds) de cordon à enrouler autour de la lampe, cf. figure 1. Ce mètre vingt-deux permet de procéder au remplacement de la lampe une fois la piscine remplie d'eau.
6. Couper le cordon au niveau de la boîte de dérivation en laissant au moins 15 cm (6 pouces) pour les raccordements.
7. Couper la gaine extérieure du cordon sur 15 cm (6 pouces) afin de mettre à nu les trois conducteurs internes isolés en veillant à ne pas endommager leur isolement.
8. Raccorder les trois conducteurs aux fils correspondants du circuit électrique dans la boîte de dérivation (conducteur noir raccordé au fil de tension, conducteur blanc au fil de retour et conducteur vert au fil de terre) et refermer solidement le couvercle de la boîte.

### **AVERTISSEMENT**

À moins qu'elle ne soit totalement immergée dans l'eau, ne jamais utiliser cette lampe pendant plus de 10 secondes, car elle atteindrait alors des températures excessives susceptibles de provoquer des brûlures graves ou de casser l'ampoule ou la lentille et d'entraîner par là des blessures graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes, ou encore des dégâts matériels.

9. Remettre l'ensemble lampe dans la niche et serrer la vis de guide spéciale en acier inoxydable.

### **AVERTISSEMENT**

N'utiliser que la vis de guide spéciale en acier inoxydable livrée avec cette lampe immergée. Cette vis fixe solidement le logement à la bague de montage et à la niche immergée et assure la mise à la terre. L'emploi de toute autre vis risque de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique.

10. Ne pas utiliser la lampe pendant plus de 10 secondes avant que la piscine ne soit suffisamment remplie pour que la lampe soit totalement immergée dans l'eau. Mettre alors en marche l'interrupteur ou le disjoncteur principal ainsi que l'interrupteur de commande de la lampe afin d'en vérifier le bon fonctionnement.

### Sction III. Remplacement d'une ampoule uniquement

#### **⚠ DANGER**



Sous peine de provoquer le décès ou des dommages corporels graves pour l'installateur, le technicien de maintenance, les utilisateurs de la piscine ou d'autres personnes par suite d'un choc électrique, veiller à toujours déconnecter la lampe de la piscine du secteur au niveau du disjoncteur avant de procéder à son entretien.

- A. Mettre à l'arrêt l'interrupteur ou le disjoncteur principal ainsi que l'interrupteur de commande de la lampe immergée.
- B. Se procurer les éléments suivants :
1. Un nouveau joint de lentille (référence 79108600).
  2. Une ampoule du type correct et de la puissance qui convient, cf. tableau ci-contre.

#### **Spécifications de l'ampoule :**

120 volts - 250 watts - ampoule T-4\*\*  
120 volts - 100 watts - ampoule T-4\*\*  
120 volts - 60 watts - ampoule PAR 16\*\*\*  
12 volts - 100 watts - ampoule R-20\*\*\*  
12 volts - 75 watts - ampoule MR-16\*\*

\*\* AquaLight - \*\*\* SpaBrite

Tableau 1.

#### **Modèles 12\* volts**

75 watts  
100 watts  
\*Transformateur néces  
saire

#### **Modèles 120 volts**

60 watts, 100 watts  
250 watts

#### **⚠ AVERTISSEMENT**

Ne remplacer l'ampoule que par un modèle de type et de puissance semblables, faute de quoi on risque d'endommager l'ensemble lampe et de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique et pouvant également entraîner des dégâts matériels.

#### **⚠ AVERTISSEMENT**

Installer toujours un nouveau joint de lentille (référence 79108600) lorsque l'on démonte la lampe, faute de quoi de l'eau pourrait pénétrer dans l'ensemble et :

- (a) créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique, ou
- (b) briser la lampe ou la lentille, ce qui pourrait de même provoquer des blessures graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes, ou entraîner des dégâts matériels.

- C. Pour retirer l'ensemble lampe, ôter la vis de guide spéciale en acier inoxydable située au sommet de la bague avant, retirer l'ensemble de la niche et le placer sur la plate-forme.

#### **⚠ AVERTISSEMENT**

Veiller à conserver la vis de guide spéciale en acier inoxydable de cette lampe immergée. Cette vis fixe solidement le logement à la bague de montage et à la niche immergée et assure la mise à la terre. L'emploi de toute autre vis risque de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique.

- D. Démontez l'appareil d'éclairage et retirez l'ampoule. Ôtez le vieux joint et s'en débarrassez.
- E. Lors de la pose de la lampe, installez un nouveau joint Pentair Water Pool and Spa référence 79108600.
- F. Sélectionnez l'ampoule de remplacement dans le tableau 1.

1. Pour les lampes AquaLight de 100 et 250 watts, voir les figures 2 et 3 ci-dessous.
2. Rapprochez les extrémités du fil de fer au niveau des flèches, cf. figure 2, jusqu'à le refermer en formant une ouverture en losange, cf. figure 3.
3. Tout en maintenant le fil dans cette forme, cf. figure 3, introduisez l'ampoule à travers l'ouverture en losange et la vissez dans la douille.
4. Veillez à ne pas laisser l'ampoule entrer en contact avec la peau nue car cela risquerait d'en réduire la durée de service.

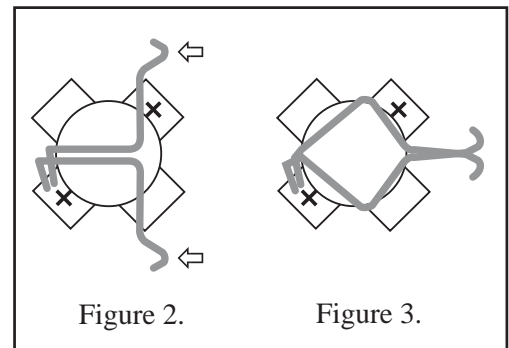


Figure 2.

Figure 3.

## **AVERTISSEMENT**

À moins qu'elle ne soit totalement immergée dans l'eau, ne jamais utiliser cette lampe pendant plus de 10 secondes, car elle atteindrait alors des températures excessives susceptibles de provoquer des brûlures graves ou de casser l'ampoule ou la lentille, et d'entraîner par là des blessures graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes, ou encore des dégâts matériels.

G. Fixer la bague à l'appareil d'éclairage. Pour assurer l'étanchéité, les vis d'étanchéité doivent être serrées de la manière suivante:

1. Pour les lampes à bague avant en chrome ou en laiton :

- (a) Serrer partiellement la vis à la position 3 heures, puis partiellement encore celle à la position 9 heures. Serrer partiellement une vis du côté opposé, puis partiellement encore celle placée dans la position diamétralement opposée.
- (b) Continuer à serrer partiellement toutes les vis comme indiqué ci-dessus jusqu'à ce qu'elles soient toutes solidement et uniformément vissées (on recommande un couple de 20 pouces-livres [22,5 kg-cm]).

2. Pour les lampes à bague avant en acier inoxydable:

Monter la vis et l'écrou à 45 degrés environ à droite de la vis de guide spéciale en acier inoxydable et de l'écrou correspondant sur le collier unitension jusqu'à ce que la distance entre les extrémités du collier soit égale à 6 mm (1/4 de pouce).

Voir à la page 23 les consignes de montage de la bague avant en acier inoxydable.

H. Remettre l'ensemble lampe dans la niche et serrer la vis sans tête spéciale en acier inoxydable.

## **AVERTISSEMENT**

N'utiliser que la vis de guide spéciale en acier inoxydable livrée avec cette lampe immergée. Cette vis fixe solidement le logement à la bague de montage et à la niche immergée et assure la mise à la terre. L'emploi de toute autre vis risque de créer un danger électrique pouvant provoquer le décès ou des dommages corporels graves pour les utilisateurs de la piscine, les installateurs ou d'autres personnes par suite d'un choc électrique.

I. Ne pas utiliser la lampe pendant plus de 10 secondes avant que la piscine ne soit suffisamment remplie pour que la lampe soit complètement immergée dans l'eau. Mettre alors en marche l'interrupteur ou le disjoncteur principal ainsi que l'interrupteur de commande de la lampe afin d'en vérifier le bon fonctionnement.

### **Consignes de montage de la bague avant en acier inoxydable**

1. La lampe étant posée sur sa base, placer l'ensemble joint sur son logement comme indiqué (cf. figure 4). **UN NOUVEAU JOINT DE LENTILLE DOIT OBLIGATOIREMENT ÊTRE UTILISÉ CHAQUE FOIS QUE LA LAMPE EST RÉASSEMBLÉE.** Centrer la bague avant en acier inoxydable et la placer par-dessus l'ensemble lentille et joint. Pendant l'installation de cet ensemble, les leviers de blocage devraient être libres en position basse. Aligner la vis de guide spéciale en acier inoxydable de la bague avant sur la flèche de l'étiquette marquée « TOP » (Haut) – la flèche de cette étiquette doit s'aligner sur la vis de guide de la bague.
2. Les extrémités pliées du collier circulaire unitension étant dirigées vers le bas, ouvrir ce dernier et l'insérer dans les rainures en « U » des leviers de blocage. S'assurer que les extrémités pliées du collier se trouvent bien entre les deux leviers comme indiqué sur la figure 4, emplacement A. Vérifier que le collier est correctement engagé dans les rainures de tous les leviers, cf. figure 5.
3. Tourner la lampe de manière à ce qu'elle repose sur sa lentille. Serrer la vis et l'écrou jusqu'à ce que les extrémités du collier ne soient plus séparées que par 6 mm (1/4 de pouce) tout au plus, cf. figure 5.

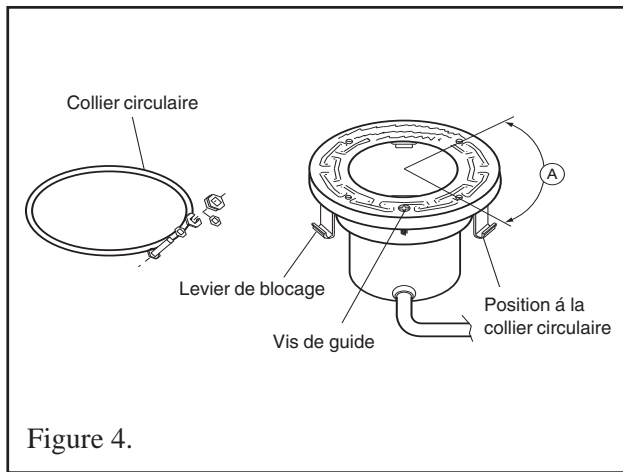


Figure 4.

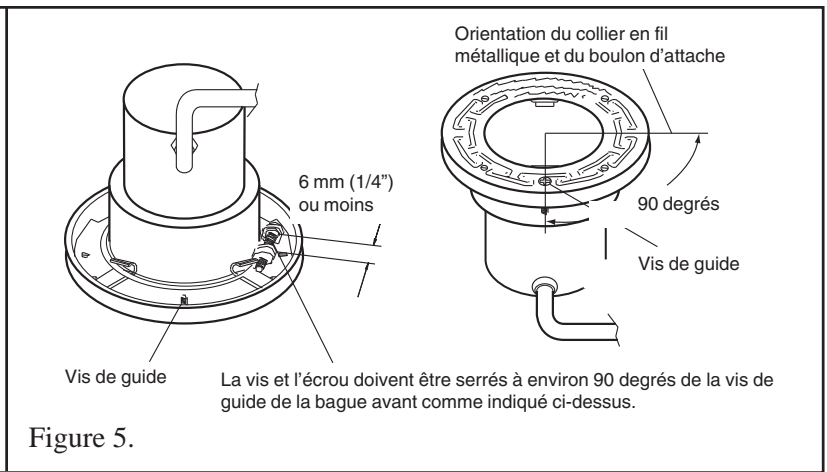
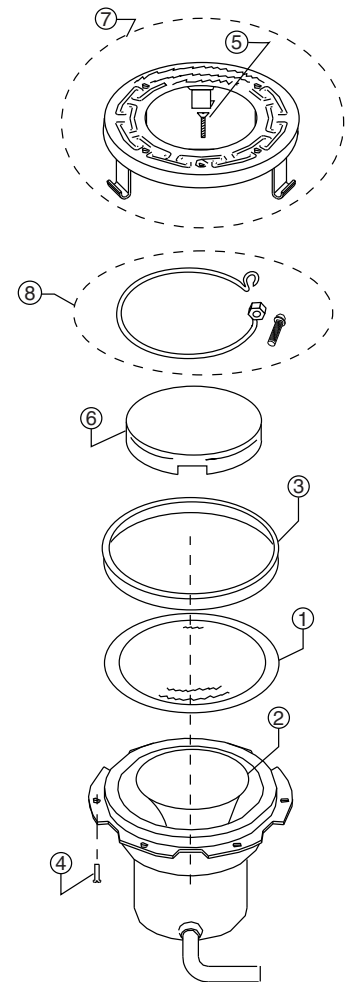


Figure 5.

## Section IV. Nomenclature des pièces

Article No.	Pièce No.	Description
1	79107800	Lentille transparente en verre trempé, 10 cm (4") de diamètre (12 volts SpaBrite, 120 volts / 12 volts AquaLight)
1	650086	Lentille transparente en verre trempé, 10 cm (4") de diamètre (120 volts SpaBrite)
2	650139Z	Ampoule 60 watts, 120 volts, PAR 16, (SpaBrite)
2	79108100	Projecteur, base moyenne, 100 watts, 12 volts (SpaBrite)
2	79102900	Douille à vis pour ampoule quartz-halogène 100 watts (AquaLight)
2	79113800	Douille à vis pour ampoule quartz-halogène 250 watts (AquaLight)
2	79112400	Ampoule 75 watts, 12 volts, 2 pôles (AquaLight)
2	070517	Ampoule à baïonnette 100 watts, 120 volts (AquaLight)
2	79112700	Ampoule à baïonnette 250 watts, 120 volts (AquaLight)
3	79108500	Joint de lentille, 10 cm (4") de diamètre (12 volts SpaBrite)
3	79108600	Joint en silicone, pour 100 watts, 250 watts (AquaLight, et 120 volts SpaBrite)
4	98208600	Vis inox 10-24 x 3/8" (9 mm), 6 requises, pour laiton-chrome
5	79104800	Vis de guide avec rondelle captive en caoutchouc, laiton
5	619355	Vis de guide avec rondelle captive en caoutchouc, inox
6	79108900	Lentille colorée en rouge à changement rapide
6	79109000	Lentille colorée en bleu à changement rapide
6	650015	Lentille colorée en magenta à changement rapide
6	650016	Lentille colorée en pourpre à changement rapide
6	650017	Lentille colorée en teal à changement rapide
6	650018	Lentille colorée en vert à changement rapide
6	650019	Lentille colorée en emballent (cing colorée) à changement rapide
7	79111600	Ensemble bague avant inox
8	79210400	Ensemble fil inox unitension avec écrou soudé



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