# PENTAIR

# LIMITED WARRANTY

**You've always been able to count on the quality and long service life of Pentair products. We use the very best standards of workmanship, materials, and manufacturing processes to deliver value and peace of mind. Please review this document for details of general warranty terms and conditions and visit *www.pentair.com/warranty* for information regarding the coverage duration and any possible warranty exceptions for your specific pool and spa equipment. Pentair offers:**

- **LIMITED WARRANTY:** Pentair warrants its products to be free from defects in material and/or workmanship for a period of sixty (60) days (parts only) from the original date of purchase and/or installation. Customer agrees to prepay all shipping charges to Pentair.
- **EXTENDED WARRANTY:** To receive a product extended warranty (longer than 60 days from the original date of installation), customer must:
  1. Register the product;
  2. Provide a copy of the sales receipt; and
  3. Provide a copy of the installation invoice, provided by the qualified installer, within 60 days of installation (if required). Certain products do not require qualified installation but still require product registration and copy of the sales receipt to receive the extended warranty.
- **TRADEGRADE WARRANTY:** TradeGrade products must be purchased from a retail store (brick and mortar), pool builder or pool service company. If purchased online (via internet) the product will only receive a sixty (60) day limited warranty.

## GENERAL WARRANTY TERMS AND CONDITIONS

### Denial of Warranty Claim

A warranty claim may be denied under the following circumstances:

1. Damage caused by careless handling, improper repackaging, or shipping.
2. Damage due to misapplication, misuse, abuse or failure to operate equipment as specified in the owner's manual.
3. Damage caused by failure to install products as specified in the owner's manual.
4. Damage due to unauthorized product modifications or failure to use Pentair original replacement parts.
5. Damage caused by negligence, or failure to properly maintain products as specified in the owner's manual.
6. Damage caused by failure to maintain water chemistry in conformity with the standards of the swimming pool industry for any length of time.
7. Damage caused by water freezing inside the product.
8. Accidental damage, fire, acts of God, or other circumstances outside the control of Pentair.

### Pentair Warranty Obligations

Should a defect in workmanship and/or material in any item covered by this warranty become evident during the term of the warranty, then upon the customer following the procedures set forth below, Pentair will, at its sole option, repair or replace such product or part of equal value, in lieu of repair.

Pentair is not, however, responsible under this warranty for any cost of shipping or transportation of the product or parts thereof to or from the Technical Service Department. Also, Pentair is not liable for any loss of time, inconvenience, incidental expenses such as telephone calls, labor or material charges incurred in connection with the removal or replacement of the equipment, or any other incidental or consequential damages.

The above mentioned warranties are void if the product is repaired or altered in any way by any persons, agents or representatives other than those authorized by Pentair. Expendables including, but not limited to refrigerant, recovery of refrigerant, or transportation for components are not covered under this limited warranty. Reasonable vehicle trip and evaluation charges may be assessed by a Pentair service representative. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

All extended warranties are applicable to the original owner only, beginning on the date of installation and are not enforceable by any third party.

*- Continued on Back Side -*



1620 HAWKINS AVE., SANFORD, NC 27330 • 10951 W. LOS ANGELES AVE., MOORPARK, CA 93021
800.831.7133 WWW.PENTAIR.COM

P/N 151632.A 7/19

*Please detach along dotted line and mail this section. Keep the warranty card for your records.*

PENTAIR

# PRODUCT REGISTRATION CARD

Please promptly complete your product registration. In the unlikely event we must notify you of safety modifications to your product, under the Consumer Product Safety Act, this will allow us to communicate with you quickly. **Incomplete or missing information such as your serial number will prevent your product from being registered**. Your Limited Warranty is attached to this card. Please detach and review thoroughly so you are familiar with the terms of your warranty coverage. Please keep in a safe place.

**TO RECEIVE EXTENDED WARRANTY: 1. REGISTER YOUR PRODUCT 2. PROVIDE SALES RECEIPT AND INSTALLATION INVOICE[1], PROVIDED BY THE QUALIFIED INSTALLER, WITHIN 60 DAYS OF INSTALLATION.**

TWO WAYS TO COMPLETE YOUR PRODUCT WARRANTY REGISTRATION:

1) **ONLINE:** Visit **www.pentair.com/registration** to complete registration, upload sales receipt and installation invoice (best for registering multiple products).

2) **BY MAIL:** Complete this card and attach sales receipt, and installation invoice.

## 1 PRODUCT INFORMATION

Serial Number(s):_____

Product Name(s): _____

This product: ☐ Replaced an existing unit ☐ Did not replace an existing unit (New)

Where did you purchase your Pentair product(s)?

☐ Pool Builder ☐ Pool Store ☐ Pool Service Co. ☐ Mail Order ☐ Internet ☐ Other

## 2 POOL OWNER INFORMATION

Pool Type: ☐ Inground ☐ Inground Pool/Spa Combination ☐ Aboveground ☐ Spa Only

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Email: _____

☐ I do not wish to receive promotional emails or surveys from Pentair.

## 3 PURCHASE & QUALIFIED INSTALLER INFORMATION

Please attach a copy of the **sales receipt** and **qualified installer's invoice** to this card as proof of qualified installation and purchase.

**Be sure your documents include the following purchase and installation information:**

- Company name and location of purchase
- Date of purchase
- Name, location, and phone number of installer
- Date of installation

[1] A qualified installation invoice is not needed if your product does not require professional installation in order to receive an extended warranty. Refer to *www.pentair.com/warranty* for details.

**ALL INFORMATION REQUESTED ABOVE OR ONLINE IS REQUIRED IN ORDER TO RECEIVE AN EXTENDED WARRANTY**

PENTAIR

FOLD IN HALF AND SEAL FOR MAILING

PENTAIR WATER POOL AND SPA, INC.
PO BOX 1228
FARMINGTON MO 63640-9852

POSTAGE WILL BE PAID BY ADDRESSEE

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT 8 FARMINGTON MO

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

PENTAIR

# LIMITED WARRANTY

## GENERAL WARRANTY TERMS AND CONDITIONS (continued)

### Warranties by Others
Some Pentair products incorporate components manufactured by other manufacturers. Some of these manufacturers provide warranties in addition to the warranty provided by Pentair herein. In all such cases, a copy of the third party manufacturer's warranty will be provided with the product. To the extent protection provided under any such third party warranty exceeds the Limited Warranty provided herein, the Customer will have to contact the specific manufacturer for the additional protection.

### No Other Warranties
To the maximum extent permitted by applicable law, Pentair disclaims all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product(s), part(s) and/or any accompanying written materials.

### Procedure for Obtaining Performance
In order to obtain the benefits of this warranty, the consumer who made the original retail purchase must contact the Pentair Technical Service Department as soon as possible after discovery of the product related issue, but in no event later than the expiration date of the respective warranty periods provided herein. Upon receipt of this communication, Pentair will promptly notify the customer of the address to which the product may be shipped. The customer shall then ship the product, freight prepaid, to the address indicated, together with a "RETURN GOODS AUTHORIZATION" form obtained from Technical Service and a brief description of the problems encountered. Unauthorized returns will not be accepted. Freight must be prepaid by customer.

### Warranties or Representations by Others
No third party has any authority to make any warranties or representation concerning Pentair or its products. Accordingly, Pentair is not responsible for any such warranties or representations.

### Other Rights
This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

### Sole Warranty
Supersedes all previous warranty publications.

# Clean & Clear® Cartridge Filter Owners Manual

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

### Table of Contents



**⚠WARNING**

Before installing this product, read and follow all warning notices and instructions accompanying this filter. 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.

### SECTION I. FILTER INSTALLATION

A. GENERAL INFORMATION

1. The filter should be mounted on a level concrete slab. Position the filter so that the instructions, warnings and pressure gauge are visible to the operator. Also, position the filter so that the piping connections, control valve and drain port are convenient and accessible for servicing and winterizing.
2. Install electrical controls (e.g., on/off switches, timers control systems, etc.) at least five (5) feet from the filter. This will allow you enough room to stand clear of the filter during system start up.
3. Provide sufficient clearance around the filter to permit visual verification that the clamp is properly installed, see Figure 1.
4. Provide 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 1, for the required vertical clearance.

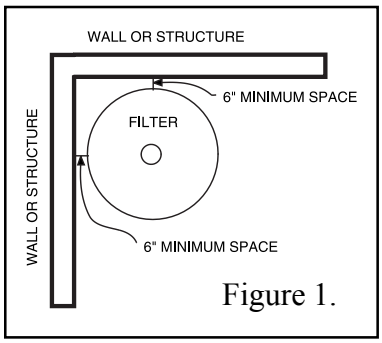

Figure 1.


***Pentair Water Pool and Spa, Inc.***
1620 Hawkins Ave., Sanford, NC 27330 • (800) 831-7133 • (919) 566-8000
10951 West Los Angeles Ave., Moorpark, CA 93021 • (800) 831-7133 • (805) 553-5000
Visit *www.pentairpool.com* or *www.staritepool.com*


Pentair Pool Products®
Because reliability matters most®

## ⚠WARNING

Risk of electrical shock or electrocution. Position the filter and High Flow™ manual 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.

5. When installing the High Flow™ manual air relief valve use the O-ring only, there is no need for thread sealing compounds. Position the filter to safely direct water drainage. Rotate the valve to safely direct purged air or water. Water discharged from an improperly positioned filter or valve can create an electrical hazard as well as damage property.

TABLE 1.

| Model | P/N | Size | Vertical Clearance Req. |
|---|---|---|---|
| CC50 | 160314 | 50 sq. ft. | 30 in. |
| CC75 | 160315 | 75 sq. ft. | 39 in. |
| CC100 | 160316 | 100 sq. ft. | 61 in. |
| CC150 | 160317 | 150 sq. ft. | 76 in. |
| CC200 | 160318 | 200 sq. ft. | 76 in. |

6. Make all plumbing connections in accordance with local plumbing and building codes. Filter plumbing connections are provided with an O-ring seal. Use only a silicone base lubricant on the O-rings. Do not use pipe joint compound, glue or solvent on the bulkhead connections.
7. The base of this filter is provided with two (2) mounting bosses for the purpose of anchoring the filter to the concrete.
8. 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. Pressures above 50 psi can cause the lid to be blown off, which can result in severe injury, death or property damage.

   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 doubt exists as to the pressure to which the system will be subjected, install an ASME approved automatic Pressure Relief or Pressure Regulator in the circulation system for the lowest working pressure of any of the components in the system.

## SECTION II. FILTER OPERATION

## ⚠WARNING

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

1. BEFORE REPOSITIONING VALVES AND BEFORE BEGINNING THE ASSEMBLY, DISASSEMBLY, OR ADJUSTMENT OF THE LOCK RING OR ANY OTHER SERVICE OF THE CIRCULATING SYSTEM: (A) TURN THE PUMP OFF AND SHUT OFF ANY AUTOMATIC CONTROLS TO ASSURE THE SYSTEM IS NOT INADVERTENTLY STARTED DURING THE SERVICING; (B) OPEN AIR RELIEF VALVE; AND (C) WAIT UNTIL ALL PRESSURE IS RELIEVED -PRESSURE GAUGE MUST READ ZERO (0).
2. WHENEVER INSTALLING THE FILTER LOCK RING, FOLLOW THE **FILTER LOCK RING INSTALLATION INSTRUCTIONS EXACTLY**.
3. ONCE SERVICE ON THE CIRCULATING SYSTEM IS COMPLETE, FOLLOW **SYSTEM RESTART INSTRUCTIONS EXACTLY.**
4. MAINTAIN CIRCULATION SYSTEM PROPERLY. REPLACE WORN OR DAMAGED PARTS IMMEDIATELY (e.g., lock ring, pressure gauge, relief valve, O-rings, etc.)
5. BE SURE THAT THE FILTER IS PROPERLY MOUNTED AND POSITIONED ACCORDING TO THE INSTRUCTIONS PROVIDED.

A. GENERAL INFORMATION

1. This filter operates under pressure. When the lock ring is installed properly and operated without air in the water system, this filter will operate in a safe manner.
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. Pressures above 50 psi can cause the lid to be blown off, which can result in severe injury, death or property damage.

   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 doubt exists as to the pressure to which the system will be subjected, install an ASME approved automatic Pressure Relief or Pressure Regulator in the circulation system for the lowest working pressure of any of the components in the system.
3. The pressure gauge is the primary indicator of how the filter is operating. Maintain your pressure gauge in good working order.

**⚠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.

4. Clean your filter when pressure reads between 8-10 psi higher than the original starting pressure. Your filter pressure reading will increase as it removes dirt from your pool. However, this buildup of pressure will vary due to different bathing loads, temperature, weather conditions, etc.
   a. MY ORIGINAL STARTING PRESSURE IS _____ psi (pounds per square inch).
      I SHOULD CLEAN THE FILTER CARTRIDGES AT _____ psi.

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**NOTE**

When the cartridge element filter is used on new pools and after cleaning the elements, introduce into the system .5 pounds of diatomaceous earth per every 100 square feet of filter area, (a one-pound coffee can equals .5 pounds of diatomaceous earth). Mix the diatomite with water and pour it into the skimmer after the pump is primed and the system is operating. This will enhance the filtration of your water.

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B. LOCK RING INSTALLATION INSTRUCTIONS

These instructions MUST BE FOLLOWED EXACTLY to prevent the lid from blowing off during system restart or later operation.

1. Perform the following steps before working on any part of the circulating system (e.g., lock ring, pump, filter, valves, etc.).
   a. Turn the pump off and shut off any automatic controls to ensure that the system is not inadvertently started during servicing.
   b. Open the High Flow™ manual air relief valve.
   c. Wait until all pressure is relieved. **Never attempt to assemble, disassemble or adjust the filter lock ring while there is any pressure in the filter.**

## ⚠WARNING

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

2. Be certain the O-ring is in position in the lower tank half. Place the filter lid over the lower tank half, making sure it is fully and firmly seated on the tank half, see Figure 2.
3. Place lock ring over the tank lid, and centering the lock ring on the threads of the tank body. Turn the lock ring clockwise until the safety latches click and the lock ring hits the stops on the body. DO NOT ATTEMPT TO OVER-TIGHTEN THE LOCK RING AFTER LOCK RING HAS HIT THE STOPS ON THE BODY.
4. Follow the System Restart Instructions in Section C.

C. SYSTEM RESTART INSTRUCTIONS

## ⚠WARNING

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

1. **Open the High Flow™ manual air relief valve until it snaps into the full open position (this only requires a quarter turn counterclockwise**). Opening this valve rapidly releases air trapped in the filter.
2. Stand clear of the filter tank, then start the pump.
3. Close the High Flow™ manual air relief valve after a steady stream of water appears.
4. The system is not working properly if either of the following conditions occur.
   a. A solid stream of water does not appear within 30 seconds, after the pump's inlet basket fills with water.
   b. The pressure gauge indicates pressure before water outflow appears.

   If either condition exists, **shut off the pump immediately**, open valves in the water return line to relieve pressure, and clean the air relief valve, see Section F. Cleaning the High Flow™ manual air relief valve. If the problem persists, call (800) 831-7133 for assistance.

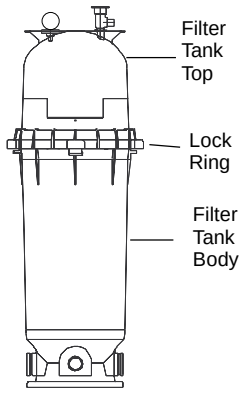


Figure 2.

D. CLEANING THE FILTER

## ⚠WARNING

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 filter system.

## ⚠CAUTION

Please heed all manufacturers' posted instructions, warnings and cautions when using Baquacil® or Baqua® Clean.

1. Turn the pump off, shut off any automatic controls to ensure that the system is not inadvertently started during servicing.

2. Open the filter High Flow™ manual air relief valve, (and the waste drain valve, or cap, if your system has one).

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**NOTE**

Special care must be taken when cleaning cartridge element used in a swimming pool or spa using Baquacil® as a sanitizer. Because of the way Baquacil® works, the cartridge element must be cleaned more thoroughly and more frequently than in a chlorine system. If extreme care is not taken to completely remove all residue from the cartridge element, a buildup will occur. This buildup will significantly shorten the life of the cartridge element.
Baquacil® is a mild coagulant which combines bacterial cells as well as other small particles contributed by the environment, bathers, etc. into particles large enough to be trapped by the filter. In comparison with all other trapped contaminants in a typical pool or spa the amount of bacterial cells that are deposited on the filter is minimal. The resulting deposit is a gray sticky film which can only be removed with Baqua® Clean. If TSP or any TSP type cleaner is used prior to stripping the film, the cleaner and the gray film will combine to form a gum-like substance. Once this occurs, the substance cannot be removed from the media and the cartridge element must be replaced.

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3. Remove hair and lint strainer pot lid and clean basket. Replace basket and secure lid.
4. Disconnect air relief drain hose if installed.
5. Remove locking ring by depressing safety latches on both sides of ring and rotate counterclockwise, then remove tank lid.
6. Remove the element assembly by placing hands in lifting handles and pulling straight up on the element assembly.
7. Remove the cartridge element from the center support tube.
8. Using a garden hose with a nozzle, direct water spray at the cartridge element to dislodge and wash away accumulated foreign matter. Water may be sprayed at the outside as well as the inside of the cartridge element for thorough cleaning.
9. Turn the cartridge element over several times during the washing operation to clean the media thoroughly.
10. Clean and remove debris from inside the filter tank and from the O-ring and O-ring groove on the tank body.
11. Replace clean cartridge element on support tube and install assembly into the filter tank body, aligning the arrow on the support tube with the inlet port of the filter, making sure it is fully seated. Make sure the internal air relief screen is attached to the top of the element support tube.
12. Replace the tank lid onto the tank body making sure it is fully and firmly seated on the tank body.
13. Place lock ring over tank lid, and centering the lock ring on the threads of the tank body, turn the lock ring clockwise until the safety latches click and the lock ring hits the stops on the body. DO NOT ATTEMPT TO OVER-TIGHTEN THE LOCK RING AFTER LOCK RING HAS HIT THE STOPS ON THE BODY.

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**NOTE**

Any time the filter tank is opened, and/or element assembly is removed, be sure to generously coat the O-ring with silicone lubricant before reassembling the unit. DO NOT USE PETROLEUM BASED LUBRICANTS BECAUSE THEY HAVE A DETERIORATING EFFECT ON RUBBER.

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14. Replace drain cap and reinstall High Flow™ manual air relief valve drain hose if used.

E. REPLACING CARTRIDGE ELEMENT

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

1. To replace cartridge element follow steps in section D, Cleaning the Filter.

F. CLEANING THE HIGH FLOW™ MANUAL AIR RELIEF VALVE

1. Turn the pump off and shut off any automatic controls to ensure that the system is not inadvertently started during servicing.
2. **OPEN THE HIGH FLOW™ MANUAL AIR RELIEF VALVE UNTIL IT SNAPS INTO THE FULL OPEN POSITION, THEN WAIT UNTIL ALL PRESSURE IS RELIEVED.**
3. With the relief valve attached to the filter tank, pull out the locking tabs and remove the valve stem and cover assembly with a counterclockwise and lifting motion, see Figure 3.
4. Clean debris from the valve stem and body. Verify that the filter tank's air passage is open by inserting a 5/16 in. drill bit through the valve body. Verify that the O-ring are in good condition, properly positioned, and lubricated with a silicone base lubricant.
5. Reinstall the valve stem and cover assembly with a downward and clockwise motion until it snaps into position.

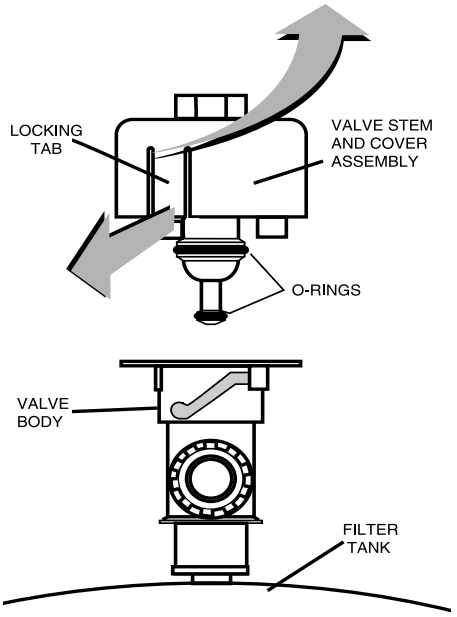


Figure 3.

## SECTION III. TROUBLESHOOTING

A. Air entering your filter is dangerous and can cause the lid to blow off. Correct any conditions in your filtration system that allow air to enter the system.
   1. Some common ways to identify air entering the system:
      a. Low water level in pool or spa - skimmer is starving for water with pump running. Add water to pool or spa.
      b. Air bubbles or low water level in pump hair and lint pot are caused by; low water level, clogged skimmer basket, split suction cleaner hose, leak in pump hair and lint pot lid, or leak in pump suction line.
      c. Air bubbles coming out of water return lines into pool or spa with pump running, see items 1.a and 1.b of this section.
      d. Air is discharged from the air relief valve on top of the filter when the valve is opened with the pump running, see items 1.a and 1.b of this section, above.

B. 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.

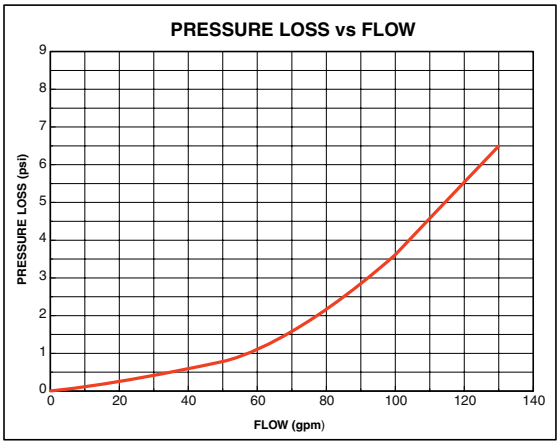
C. If pressure drops on gauge, check skimmer basket and pump basket first for debris. If the baskets are clean, shut off power to pump and turn off any automatic controls. Then turn motor shaft with your fingers. If it turns freely then the pump must be disassembled and the impeller checked to see if it is clogged. If it is not frozen or clogged then there is an obstruction in the line between the pool and the pump.

D. The pressure gauge is an important part of the filter system. It is your primary indicator of how the system is operating. Maintain your pressure gauge in good working order. Check the operation of your pressure gauge in the following manner:

   1. The pressure gauge should go to zero (0) when the system is turned off and pressure is relieved.
   2. The pressure gauge should indicate pressure when the system is operating.
   3. The pressure gauge should be readable and not damaged in any way.
   4. Replace the pressure gauge if it is not meeting the requirements of items D.1 through D.2 of this section, above.

## SECTION IV. TECHNICAL DATA

### A. Filter Pressure Loss Chart




### B. Flow Rate Table

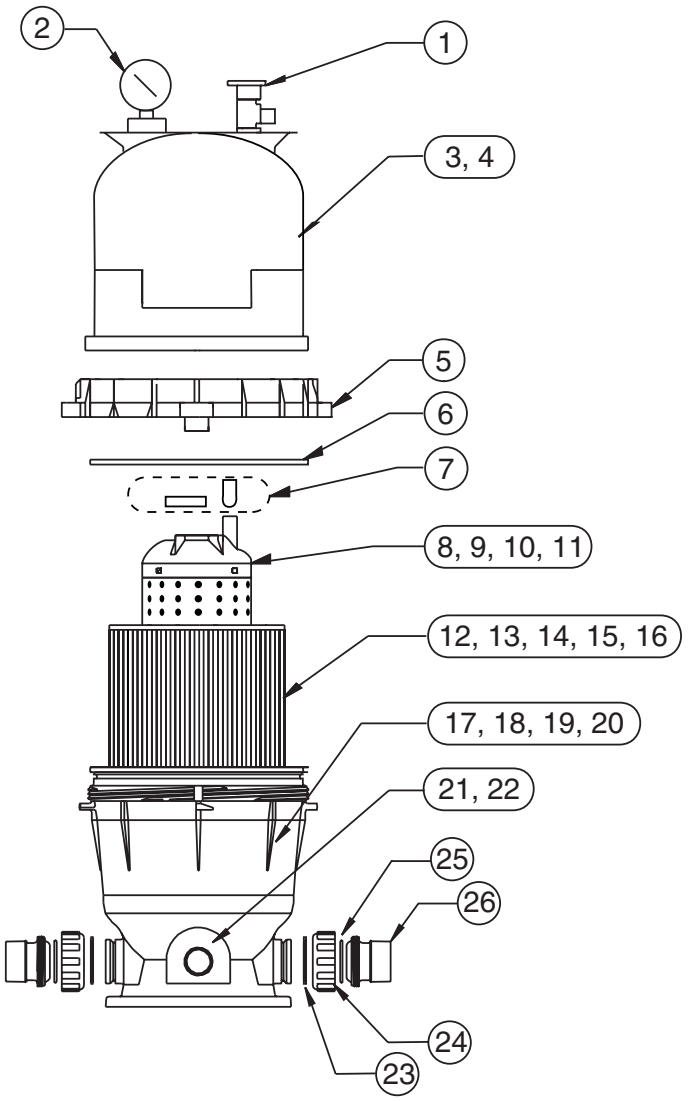
| | | Residential Maximum Cartridge Flow Rates | | | | Commercial Maximum Cartridge Flow Rates | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Product #** | **sq. ft.** | **GPM** | **GPH** | **6 hour** | **8 hour** | **GPM** | **GPH** | **6 hour** | **8 hour** |
| 160314 | 50 | 50 | 3,000 | 18,000 | 24,000 | 19 | 1,140 | 6,840 | 9,120 |
| 160315 | 75 | 75 | 4,500 | 27,000 | 36,000 | 28 | 1,680 | 10,080 | 13,440 |
| 160316 | 100 | 100 | 6,000 | 36,000 | 48,000 | 38 | 2,280 | 13,680 | 18,240 |
| 160317 | 150 | 150 | 9,000 | 54,000 | 72,000 | 56 | 3,360 | 20,160 | 26,880 |
| 160318 | 200 | 150 | 9,000 | 54,000 | 72,000 | 75 | 4,500 | 27,000 | 36,000 |

(1) One GPM per sq. ft. shown, recommended flow rate for residential is .5 GPM per sq. ft.
(2) Commercial flow rate is a maximum of .375 GPM per sq. ft. of filter area.

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

### C. Replacement Parts

| Item | Part Number | Description |
|---|---|---|
| 1 | 98209800 | High Flow™ manual air relief valve |
| 2 | 190058 | Pressure Gauge |
| 3 | 178553 | Lid, 50, 100 sq. ft. filter |
| 4 | 178561 | Lid, 75,150, 200 sq. ft. filter |
| 5 | 59052900 | Locking Ring assy. |
| 6 | 87300400 | Body O-ring |
| 7 | 59016200 | Air Bleed Sock Kit |
| 8 | 59053500 | Center Core, 50 sq. ft. filter |
| 9 | 59053600 | Center Core, 75 sq. ft. filter |
| 10 | 59053700 | Center Core, 100 sq. ft. filter |
| 11 | 59053800 | Center Core, 150, 200 sq. ft. filter |
| 12 | R173213 | Cartridge Element, 50 sq. ft. filter |
| 13 | R173214 | Cartridge Element, 75 sq. ft. filter |
| 14 | R173215 | Cartridge Element, 100 sq. ft. filter |
| 15 | R173216 | Cartridge Element, 150 sq. ft. filter |
| 16 | R173217 | Cartridge Element, 200 sq. ft. filter |
| 17 | 178562 | Bottom, 50 sq. ft. filter |
| 18 | 178554 | Bottom, 75 sq. ft. filter |
| 19 | 178563 | Bottom, 100 sq. ft. filter |
| 20 | 178560 | Bottom, 150, 200 sq. ft. filter |
| 21 | 86202000 | Drain Cap Assy. |
| 22 | 51005000 | Drain Cap Gasket |
| 23 | 39104500 | Union Nut “C” Clip |
| 24 | 98212200 | Union Nut |
| 25 | 071426 | Union O-ring |
| 26 | 79304600 | Body, Swivel |



# SAVE THESE INSTRUCTIONS



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Pentair Pool Products®
*Because **reliability** matters most®*

**This document is subject to change without notice.**

HAYWARD®

# SERIES CL100/110
# SERIES CL200/220
by HAYWARD®
# AUTOMATIC CHLORINE FEEDERS


## Owner's Manual

### IMPORTANT SAFETY INSTRUCTIONS

Basic safety precautions should always be followed, including the following: Failure to follow instructions can cause severe injury and/or death.

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

⚠ WARNING warns about hazards that could cause serious personal injury, death or major property damage and if ignored presents a potential hazard.

⚠ CAUTION warns about hazards that will or can cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe.

⚠ DANGER indicates an imminently hazardous situation which, if not avoided, will result in death, serious injury, or major property damage.

The NOTICE label indicates special instructions that are important but not related to hazards.

Hayward Pool Products
620 Division Street, Elizabeth, NJ 07207
Phone: (908) 351.5400
www.haywardpool.com

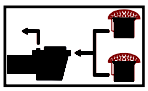
**⚠ WARNING - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.**

**⚠ WARNING – Suction Entrapment Hazard.**

Suction in suction outlets and/or suction outlet covers which are, damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:

**Hair Entrapment**- Hair can become entangled in suction outlet cover.
**Limb Entrapment**- A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.
**Body Suction Entrapment**- A negative pressure applied to a large portion of the body or limbs can result in an entrapment.
**Evisceration/ Disembowelment** - A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/ disembowelment.
**Mechanical Entrapment**- There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.

**⚠ WARNING - To Reduce the risk of Entrapment Hazards:**



- When outlets are small enough to be blocked by a person, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of three feet (3') [1 meter] apart, as measured from near point to near point.
- Dual suction fittings shall be placed in such locations and distances to avoid "dual blockage" by a user.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum system flow rate shall not exceed the flow rating of as listed on Table 1.
- Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- In addition two or more suction outlets per pump installed in accordance with latest ASME, APSP Standards and CPSC guidelines, follow all National, State, and Local codes applicable.
- Installation of a vacuum release or vent system, which relieves entrapping suction, is recommended.

**⚠ WARNING – Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.**

**⚠ WARNING – Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.**

**⚠ WARNING – Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every ten years or if found to be damaged, broken, cracked, missing, or not securely attached.**

**⚠ CAUTION – Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children.**

**⚠ WARNING – Never operate or test the circulation system at more than 50 PSI.**

**⚠ WARNING – Never change the filter control valve position while the pump is running.**

**⚠ WARNING** – To reduce risk of injury, do not permit children to use or climb on this product. Closely supervise children at all times. Components such as the filtration system, pumps, and heaters must be positioned to prevent children from using them as a means of access to the pool.

**⚠ WARNING – Hazardous Pressure.** Pool and spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during pump start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp due to pressure in the system, which could cause property damage, severe personal injury, or death. Before servicing pool and spa water circulation system, all system and pump controls must be in off position and filter manual air relief valve must be in open position. Before starting system pump, all system valves must be set in a position to allow system water to return back to the pool. Do not change filter control valve position while system pump is running. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air or air and water) is discharged.

**⚠ WARNING – Separation Hazard.** Failure to follow safety and operation instructions could result in violent separation of pump and/or filter components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, filters manual air relief valve must be in open position. Do not operate pool and spa circulation system if a system component is not assembled properly, damaged, or missing. Do not operate pool and spa circulation system unless filter manual air relief valve body is in locked position in filter upper body.

**⚠ WARNING** – **Risk of Electric Shock.** All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment.

**⚠ WARNING** – To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment.

**⚠ WARNING** – Electrical ground all electrical equipment before connecting to electrical power supply. Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard.

**⚠ WARNING** – Do NOT ground to a gas supply line.

**⚠ WARNING** – To avoid dangerous or fatal electrical shock, turn OFF power to all electrical equipment before working on electrical connections.

**⚠ WARNING** – Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

**Notes to electrician:** Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG (8.4 $mm^2$) [No. 6 AWG (13.3 $mm^2$) for Canada] solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub.
**IMPORTANT** - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

**⚠ WARNING** – Risk of Electric Shock. Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI.

**⚠ WARNING** – Risk of Electric Shock . The electrical equipment must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the electrical equipment without the test button being pushed, a ground current is flowing, indicating the possibility of an electrical shock. Do not use this electrical equipment. Disconnect the electrical equipment and have the problem corrected by a qualified service representative before using.

**⚠ CAUTION** – The pump is intended for use with permanently-installed pools and may be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

## SAVE THESE INSTRUCTIONS

## HAYWARD® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products, Inc. warrants its chemical feeders to be free from defects in materials and workmanship for a period of ONE (1) year from the date of purchase, when used in single family residential applications.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care or any Acts of God. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option, within 90 days of the receipt of defective product, barring unforeseen delays, without charge.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center please visit us at www.haywardpool.com.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its' pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

**Hayward Pool Products**
**620 Division Street**
**Elizabeth, NJ 07207**

***Supersedes all previous publications.**

**⚠ DANGER Mixing Chemicals or using fast dissolving chemicals may result in explosion and/or fire.** To avoid death, serious injury or major property damage:

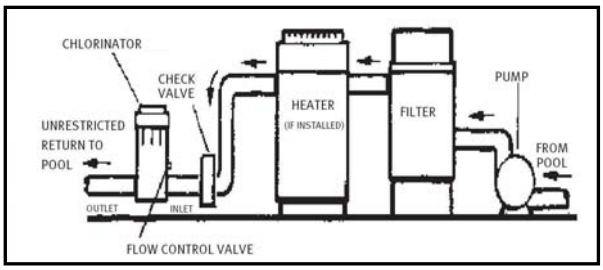
- ⚠ Use only slow dissolving Trichlor Chlorine tablets.
- ⚠ Never use fast dissolving Trichlor Chlorine tablets.
- ⚠ Never mix chemicals.
- ⚠ Never mix Trichlor Chlorine tablets with Calcium Hypochlorite, or with any other form of concentrated chlorine or other chemicals. Fire and/or explosion may result.
- ⚠ Never add any other types of chlorine, pH adjusters, shock treatments or algaecides through the skimmer. If these products must be used, they should be added directly into the pool water.
- ⚠ Never isolate chlorine feeder with valves or other devices.

**⚠WARNING** Wear eye and skin protection while maintaining or servicing this unit.

**⚠WARNING** Do not inhale fumes from the chlorinator or chemical container.

**⚠WARNING** Chlorine feeder may be under pressure. Use caution removing cover.

## INSTALLATION:




### CL–100/200

1. Your **CL–100/200** automatic chlorine feeder is designed for permanent installation in the pool water return line.
2. Always install the chlorine feeder **after** the heater. If there is no heater, install **after** the filter.

**⚠ CAUTION** Damage to the heater or filter may result if concentrated chlorine is allowed to flow through them.

An in-line positive seal corrosion resistant check valve should be installed to reduce backflow of chlorine gas when the system is shut off. If the chlorine feeder is located below water level, you may want to install a check valve to prevent water backflow when operating/servicing the unit. The CL100 has this feature built in.

3. Both the **CL–100/200** are furnished with 1 1/2" female threads. If PVC socket (solvent weld) connections are desired, order SP1500UNPAK2, socket flush union end connectors package. For threaded male and union connectors, order SP1500UNMPAK1 male union connector package (two required). Thread or socket adapters may also be used. Only use pipe sealants formulated and approved for use with ABS plastic connections (e.g. Teflon Tape, Permatex Form-A-Gasket No. 2, Laco Plasto-Joint stick). Do not over tighten pipe fitting. Proper fitting makeup is hand tight plus 1 to 1 1/2 turns maximum.

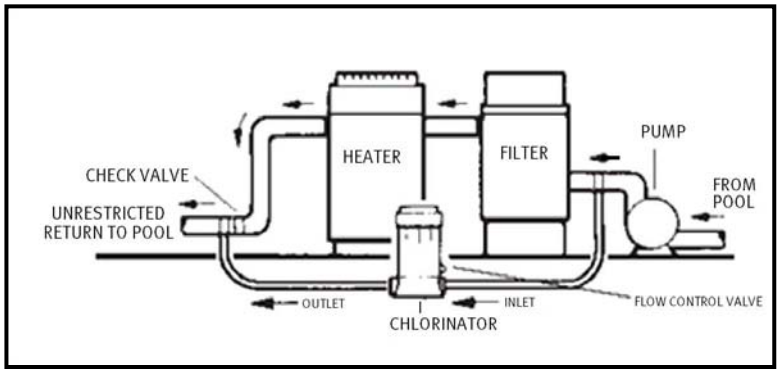
**NOTICE:** After starting up system, re-check all connections for leaks. Re-tighten as required.

**⚠ CAUTION** Never install chlorine feeder directly into copper plumbing as pipe damage may occur. If you have brass or bronze backwash valves, or other sensitive metallic components, consult your dealer for precautions or recommendations for your particular system.

### CL–110/220

1. The inlet connection should be made in the piping after the pump and before the filter. Mark location on pipe.
2. The outlet connection should be made in the piping after the heater. If no heater is being used, connection should be made after the filter. Mark location on pipe.
3. Based on the locations from steps. No. 1 and No. 2, cut tubing to required lengths. Be sure ends are cut evenly and cleanly.
4. Wrap Teflon tape on larger male thread of Check Valve and thread it hand tight plus ½ turn into outlet port of chlorinator. DO NOT OVER TIGHTEN.

**NOTICE:** The Check Valve is marked with a "dot". It also has a ball that "clicks" when you shake it.




5. Wrap Teflon tape on larger male thread of the Inlet Fitting Adapter and thread it hand tight plus ½ turn into the inlet port of chlorinator. DO NOT OVER TIGHTEN.
6. To connect inlet tubing to chlorinator, place Compression Nut over inlet tubing and slide nut up about 2". Insert the tubing all the way into the Inlet Fitting Adapter socket and, holding tubing in place, tighten nut firmly by hand. Do not over tighten.
7. Connect outlet tubing to the Check Valve in the same manner as in step 6 above.

**NOTICE:** The saddle fittings and clamps are designed to fit the O.D. of 1 1/2" or 2" pipe.

8. Drill a 3/8" hole at location identified in Step 1 of Planning Installation section. Clean all burrs, shavings etc. Fit Saddle Fitting, with gasket, into oval shaped hole in clamp and insert fitting into the 3/8" hole. Secure clamp around Saddle Fitting, gasket and pipe and tighten securely to achieve a good seal. Do not over tighten clamp.
9. Drill a 3/8" hole at location identified in Step 2 of Installation section for CL-110/220. Install Saddle Fitting as in Step 8 above.
10. Connect inlet and outlet tubing to the Saddle Fittings with Compression Nuts as in Step 6 above. Do not over tighten.

⚠ **CAUTION** Never install chlorine feeder directly into copper plumbing as pipe damage may occur. If you have brass or bronze backwash valves, or other sensitive metallic components, consult your dealer for precautions or recommendations for your particular system.

**NOTICE:** After starting up system, re-check all connections for leaks. Re-tighten as required.

# DIRECTIONS FOR USE:

## GENERAL

Before using your chlorinator, your pool/spa water should be properly balanced and conditioned and should have a chlorine residual of approximately 1.0 to 1.5 ppm. Follow dealer and chemical manufacturer's directions and instructions.

Check chlorine residual daily and adjust the dial valve for more or less chlorine. The chlorine demand for pools and spas varies based on usage, temperature, sunlight, etc. Initially, you'll have to experiment to determine the proper amount of chlorine and the correct valve setting required for your pool and filter time cycle. Follow chemical manufacturer's instructions for proper chlorine level.

⚠ **DANGER Mixing Chemicals or using fast dissolving chemicals may result in explosion and/or fire.**
To avoid death, serious injury or major property damage:

- ⚠ Use only slow dissolving Trichlor Chlorine tablets.
- ⚠ Never use fast dissolving Trichlor Chlorine tablets.
- ⚠ Never mix chemicals.
- ⚠ Never mix Trichlor Chlorine tablets with Calcium Hypochlorite, or with any other form of concentrated chlorine or other chemicals. Fire and/or explosion may result.
- ⚠ Never add any other types of chlorine, pH adjusters, shock treatments or algaecides through the skimmer. If these products must be used, they should be added directly into the pool water.
- ⚠ Never isolate chlorine feeder with valves or other devices.

⚠**WARNING** Wear eye and skin protection while maintaining or servicing this unit.

**USE ONLY GENUINE HAYWARD PARTS**

**⚠WARNING** Do not inhale fumes from the chlorinator or chemical container.
**⚠WARNING** Chlorine feeder may be under pressure. Use caution removing cover.

### REFILLING CHORINATOR

1. Shut off all pumps and pump timers.
2. Turn chlorine feeder flow control valve to "OFF".
3. Verify chlorine feeder return line to pool is unrestricted.
4. Wait one minute to relieve system pressure before attempting to remove cover.
5. If installed in a flooded system, shut off valves to isolate chlorinator.
6. Remove cover.
7. Refill chlorine feeder with slow dissolving Trichlor-Chlorine Tablets.
8. Secure cover to chlorine feeder.
9. If installed in a flooded system, open valves to assure flow from pump to pool.
10. Turn flow control valve on chlorinator to desired setting and restart pump.

## MAINTENANCE:

### TO CHANGE O-RING CL100/110

1. Read and follow instructions in Steps 1 to 5 in Refilling Chlorinator section.
2. Remove the O-Ring and replace with a Genuine Hayward Part O-Ring (part no. CLX110K).
3. Replace cover. If chlorinator needs to be refilled, read and follow instructions in Steps 6 to 8 in Refilling chlorinator section.

### TO CHANGE O-RING CL200/220

1. Read and follow instructions in Steps 1 to 5 in Refilling Chlorinator section.
2. Pry off Logo Cap, located on the cover of the chlorinator. Unscrew and remove retainer screw. Cover may now be slipped free of the Cover Cap.
3. Replace O-ring with a Genuine Hayward Part O-ring (part no. CLX200K). Reassemble being sure Slip Washers are in place on stem of Cover (inside), and under head of Retaining Screw.
4. Replace cover. If chlorinator needs to be refilled, read and follow instructions in Steps 6 to 8 in Refilling Chlorinator section.

### TO REMOVE FLOW CONTROL VALVE HANDLE

Set pointer to FULL. Insert screwdriver in slot opposite pointer, lift up and rotate handle counterclockwise. This allows the handle index lock tab to clear the body ridge.

### TO INSTALL FLOW CONTROL VALVE HANDLE

1 The flow control valve handle Genuine Hayward Part (CLX200PA) is furnished in two pieces.
2 To install push the handle into the stem and fully install stem into body. You may have to remove handle and reposition to assure the stem is fully seated.
3 Remove handle by pulling straight out.
4 Apply a single drop of Super Glue to the end of the stem, push on handle, positioned in the OFF position. Apply pressure for 30 seconds.

### WINTERIZING

Where freezing temperatures can be expected, drain all water and remove all chlorine from chlorinator. (For in-line permanently installed unit remove drain plug). Carefully remove all tablets and pieces of tablets. Rinse out chlorinator thoroughly with water. Replace cover and drain plug.

### VACUUMING

When vacuuming, close flow control valve to prevent bypass of sediment and possible clogging of control valve.

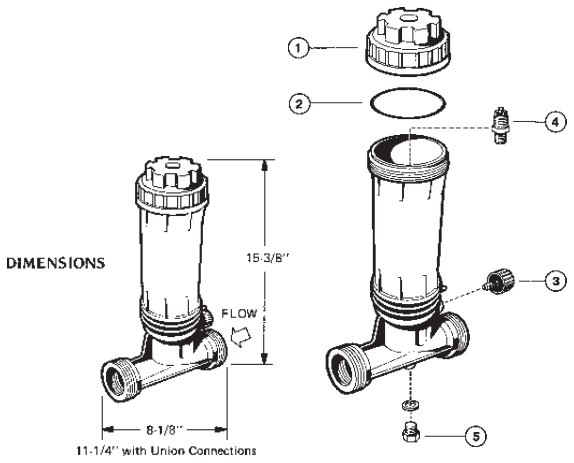
### LUBRICATION

Never use petroleum type lubricants on Cover O-Ring. To lubricate use Genuine Hayward Part Jack's Lube No. 327 (Part No. SP032712).

# SPARE PARTS

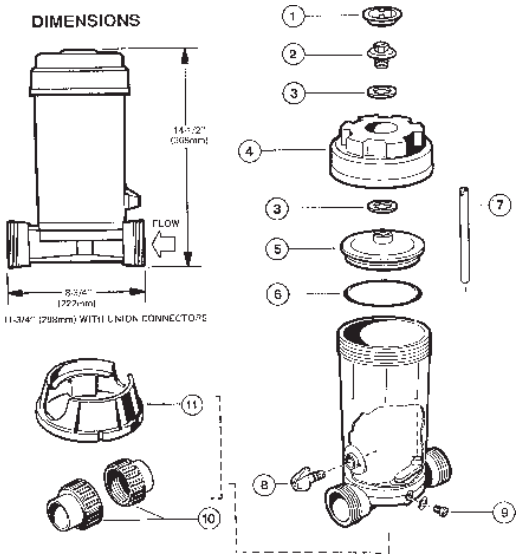
## CL100

| Ref No. | Part Number | Description | No. Req'd |
|---|---|---|---|
| 1 | CLX110C | Cover | 1 |
| 2 | CLX110K | O-Ring | 1 |
| 3 | CLX110FA | Control Knob Assembly | 1 |
| 4 | CLX220CV | Check Valve Assembly | 1 |
| 5 | SPX1700FGV | Drain Plug w/Gasket | 1 |
| | SP032712 | Hayward Jack's Lub #327 | 1 |



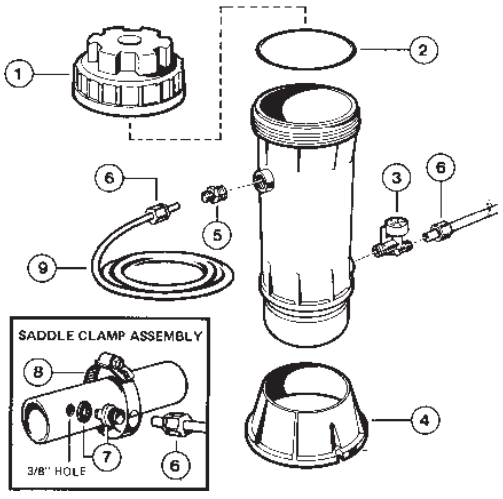

## CL200

| Ref No. | Part Number | Description | No. Req'd |
|---|---|---|---|
| 1 | CLX200E | Logo Cap | 1 |
| 2 | CLX200G | Cover Retaining Screw | 1 |
| 3 | CLX200W | Slip Washer | 2 |
| 4 | CLX200C | Cover Cap | 1 |
| 5 | CLX200B | Cover | 1 |
| 6 | CLX200K | O-Ring | 1 |
| 7 | CLX200H | Feeder Tube (some models) | 1 |
| 8 | CLX200PA | Control Valve Assembly | 1 |
| 9 | SPX1700FA | Drain Plug w/Gasket | 1 |
| 10 | SPX1500UNPAK | Union Connectors–Socket (2) | - |
| 11 | CLX200BS | Base | 1 |
| | SP032712 | Hayward Jack's Lub #327 | 1 |



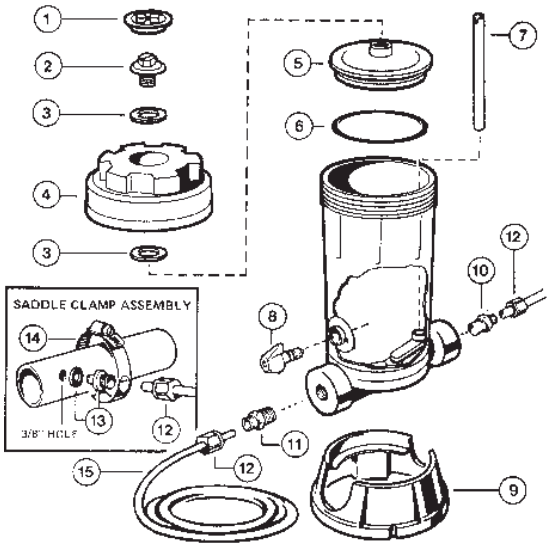

## CL110

| Ref No. | Part Number | Description | No. Req'd |
|---|---|---|---|
| 1 | CLX100C | Cover | 1 |
| 2 | CLX110K | O--Ring | 1 |
| 3 | CLX110DA | Dial Flow Valve | 2 |
| 4 | CLX110B | Base | 1 |
| 5 | CLX220CV | Check Valve Assembly | 1 |
| 6 | CLX220H | Compression Nuts | 4 |
| 7 | CLX220G | Saddle Fitting | 2 |
| 8 | CLX220K | Saddle Clamp | 2 |
| 9 | CLX220J | Plastic Tubing–8 Ft. | 1 |
| | SP032712 | Hayward Jack's Lub #327 | 1 |



# CL220

| Ref No. | Part Number | Description | No. Req'd |
|---|---|---|---|
| 1 | CLX200E | Logo Cap | 1 |
| 2 | CLX200G | Cover Retaining Screw | 1 |
| 3 | CLX200W | Slip Washer | 2 |
| 4 | CLX200C2 | Cover Cap | 1 |
| 5 | CLX200B | Cover | 1 |
| 6 | CLX200K | O-Ring | 1 |
| 7 | CLX200H | Feeder Tube (some models) | 1 |
| 8 | CLX200PA | Control Valve Assembly | 1 |
| 9 | CLX220B | Base | 1 |
| 10 | CLX220CV | Check Valve Assembly | 1 |
| 11 | CLX220D | Inlet Fitting Adapter | 1 |
| 12 | CLX220H | Compression Nuts | 4 |
| 13 | CLX220G | Saddle Fitting | 2 |
| 14 | CLX220K | Saddle Clamp | 2 |
| 15 | CLX220J | Plastic Tubing—8 ft. | 1 |
| | SP032712 | Hayward Jack's Lub #327 | 1 |




## PRODUCT REGISTRATION

**(Retain For Your Records)**

**DATE OF INSTALLATION** _____

**▲Retain this Warranty Certificate (upper portion) in a safe and convenient location for your records.**

**DETACH HERE: Fill out bottom portion completely and mail within 10 days of purchase/installation or register online.**

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## AUTOMATIC CHLORINE FEEDERS Warranty Card Registration

**Register online at www.haywardpool.com**

Please Print Clearly:

**First Name**_____ **Last Name**_____

**Street Address**_____

**City**_____ **State**_____ **Zip**_____

**Phone Number**_____ **Purchase Date**_____

**E-Mail Address**_____

**Serial Number**

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | |

Model Number_____

Pool Capacity_____(U.S. Gallons)

☐Please include me on all e-mail communications regarding Hayward® Equipment or promotions.

Mail to: Hayward Pool Products, 620 Division Street, Elizabeth, NJ 07207

Attn: Warranty Dept

Or REGISTER YOUR WARRANTY ON-LINE AT WWW.HAYWARDPOOL.COM

Years Pool has been in service

☐ < 1 year ☐ 1-3 ☐ 4-5 ☐ 6-10 ☐ 11-15 ☐ >15

Purchased from_____

☐Builder ☐Retailer ☐Pool Service ☐Internet/Catalog

Company Name_____

Address_____

City_____ State_____ Zip_____

Phone_____

Type of Pool:

☐ Concrete/Gunite ☐ Vinyl ☐ Fiberglass

☐ Other_____

☐ New Installation ☐ Replacement

Installation for:

☐ In Ground ☐ Above Ground ☐ Spa

HAYWARD®

Hayward is a registered trademark of Hayward Industries, Inc.

PENTAIR

# SPABRITE® & AQUALIGHT® UNDERWATER LIGHT

## INSTALLATION GUIDE

LISTED

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

### Table of Contents



### ⚠ 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. **DO NOT USE** Fountain Fixture Stand. |
| Fountain | Wet-Niche Submersible Swimming Pool (or Spa) Luminaire (Light) | Fixture Housing (Forming Shell) or Fountain Fixture Stand. |

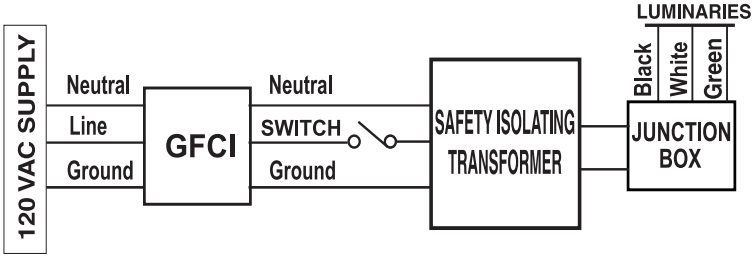
**(*) Note:** Wet-niche luminaires complying with requirements for both uses may bear both the Listed Wet-Niche Swimming Pool (or Spa) Luminaire UL Mark and the Listed Wet-Niche Submersible Luminaire UL Mark. A luminaire not bearing the corresponding UL Listing Mark is not considered by UL to have been 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).
- 12 VAC LUMINARIES SPECIFICATION: 120VAC ~ , 50/60 Hz




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

**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.

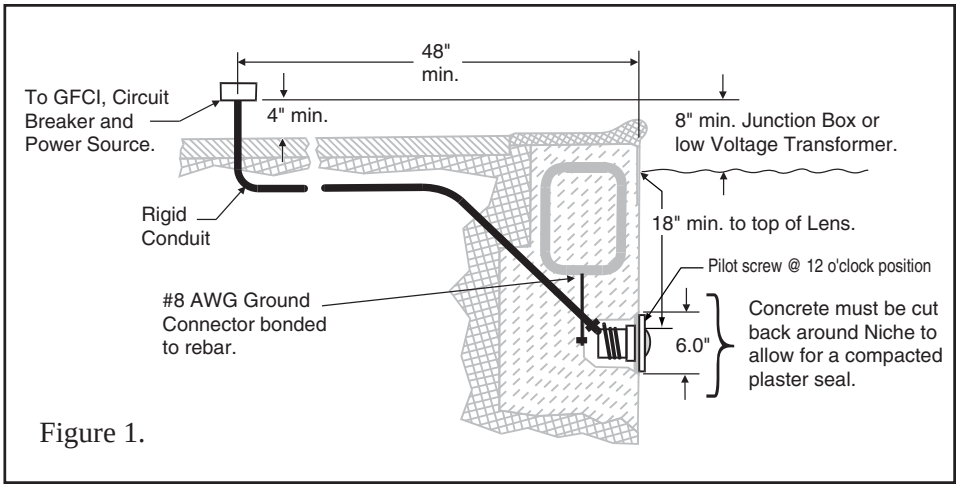


Figure 1.

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 | 60 watt,100 watt |
| | 250 watt |

Table 1.

## 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.

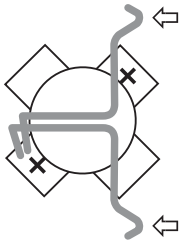


Figure 2.

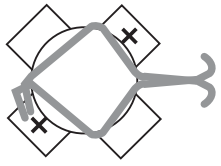


Figure 3.

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.

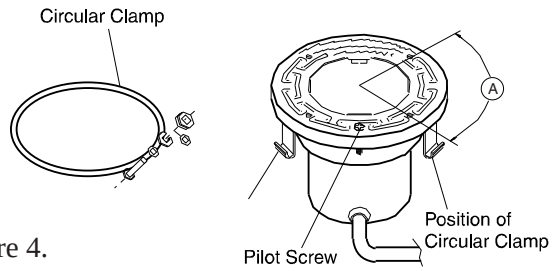
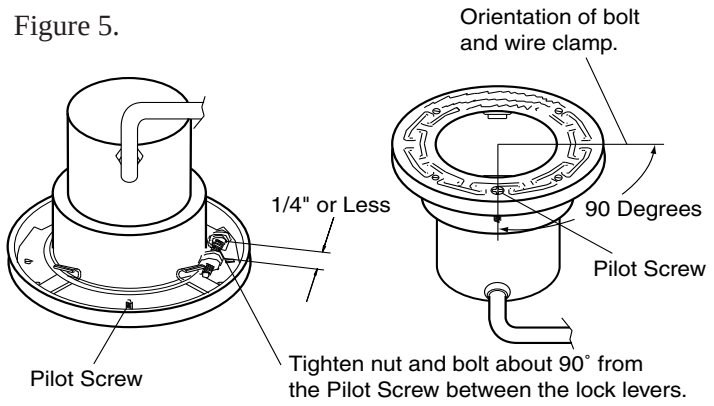
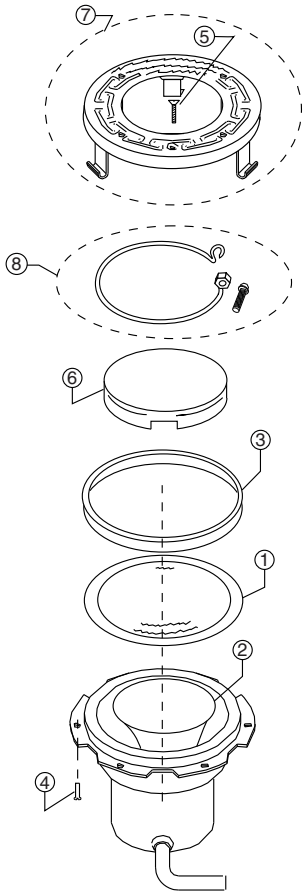



Figure 4.

Figure 5.




## 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

1620 HAWKINS AVE., SANFORD, NC 27330 • (919) 566-8000
10951 WEST LOS ANGELES AVE., MOORPARK, CA 93021 • (805) 553-5000
WWW.PENTAIRPOOL.COM

# LÁMPARA SUBACUÁTICA SPABRITE™ / AQUALIGHT™

## Manual del Propietario

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

LISTED

## Índice



### ⚠ 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 Electrocución!**

Este producto debe ser instalado por un electricista certificado o licenciado o por un representante de servicio de manutención 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 manutención de las luces. El no hacerlo de esta forma puede resultar en la muerte o lesiones serias al representante de servicios de manutención, usuarios de la piscina u otros debido a un golpe eléctrico. LEA Y SIGA TODAS LAS INTRUCCIONES 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 ningun 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**

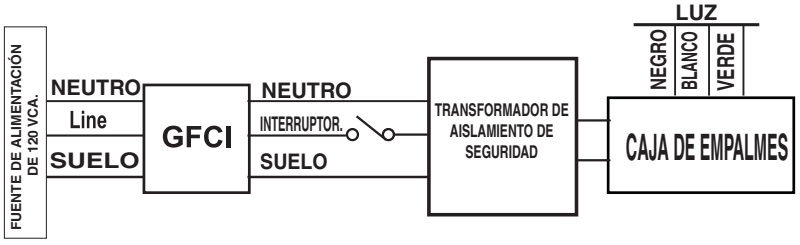
| **Lugar de uso de Lámpara (Luz)** | **Reflector de Fuente Pentair* (P/N 560000 – P/N 560001) (P/N 560002 – P/N 560003)** | **Método de Instalación Requerido** |
|---|---|---|
| Piscina o Spa | Lámpara (Luz) para Piscina (o Spa) con nicho impermeables fuente. | SÓLO carcasa de reflector (Casco de molde). **NO UTILIZAR** 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 LA LENTE (FISURAS) CON UNA NUEVA LENTE 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





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10951 West Los Angeles Ave., Moorpark, CA 93021 • (800) 831-7133 • (805) 553-5000

## 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.

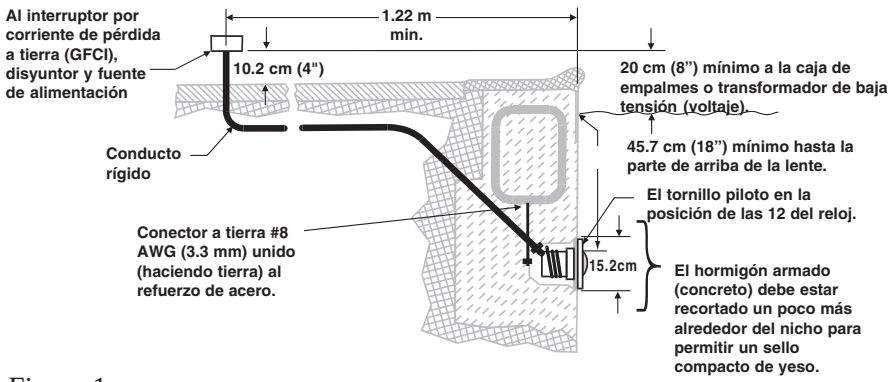



Figura 1.

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.

**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 esta 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.

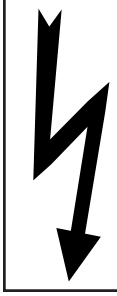
## ⚠ ADVERTENCIA

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 conexionesy 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 | Modelos de 12* voltios |
|---|---|
| 120 voltios - 250 vatios - T-4 lámp** | 75 vatios |
| 120 voltios - 100 vatios - T-4 lámp** | 100 vatios |
| 120 voltios - 60 vatios - PAR 16 lámp*** | *Se requiere transformador |
| 12 voltios - 100 vatios - R-20 lámp*** | |
| 12 voltios - 75 vatios - MR-16 lámp** | **Modelos de 120 voltios** |
| ** AquaLight - ***SpaBrite | 60 vatio, 100 vatios |
| | 250 vatios |

Tabla 1.

### ⚠ 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 vezinstaladores, 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.

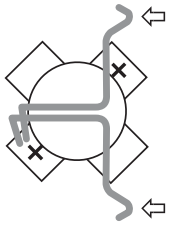


Figura 2.

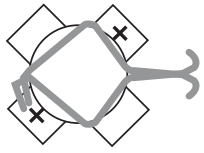


Figura 3.

## ⚠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).

Figura 4.

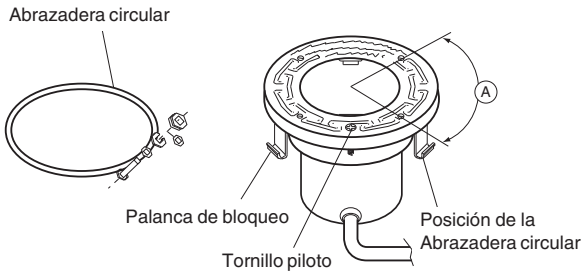
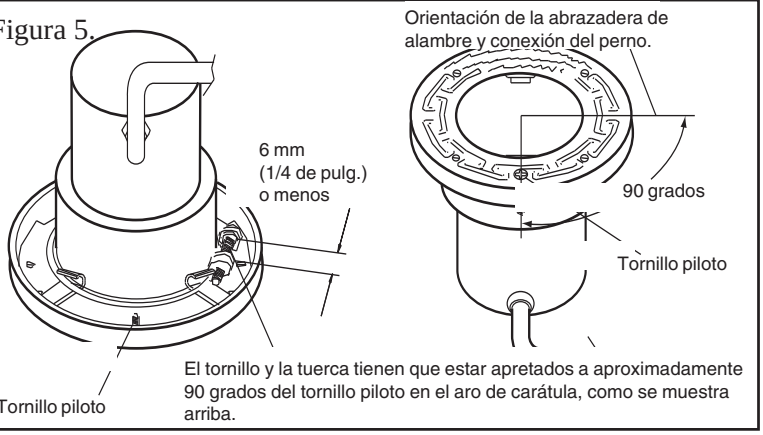
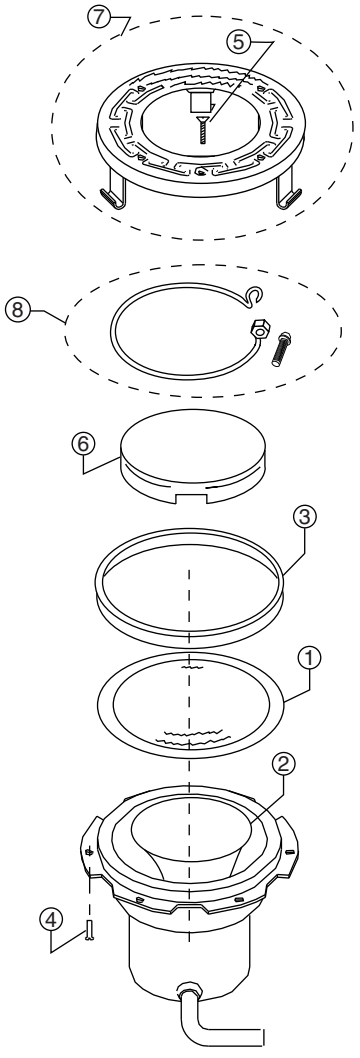



Figura 5.




El tornillo y la tuerca tienen que estar apretados a aproximadamente 90 grados del tornillo piloto en el aro de carátula, como se muestra arriba.

## 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 vatio, 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 colors) |
| 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

LISTED

### Table des matières



### ⚠ 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. **NE PAS UTILISER** le support pour fontaine. |
| Fontaine | Luminaire (lumière) pour niche submersible de pour piscine (ou spa) | Bâti de luminaire (coque) ou support luminaire pour fontaine. |

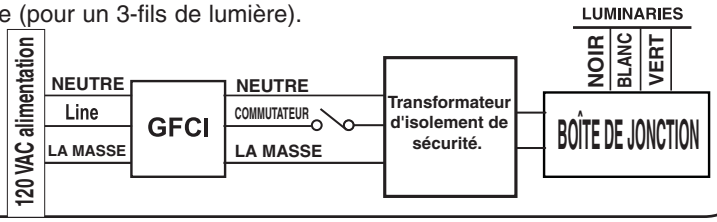
**(*) Remarque :** Les luminaires pour niches étanches se conformant aux règlements pour les deux applications peuvent porter la marque UL listée pour les luminaires pour niches étanches pour piscine (ou spa) ainsi que pour les luminaires pour niches submersibles. Un luminaire ne portant pas la marque 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.

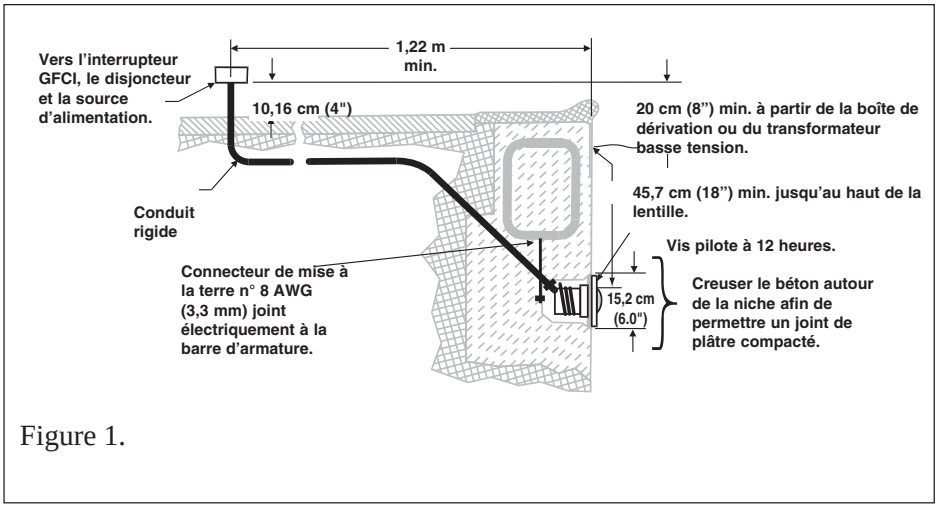



Figure 1.

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 : | Modèles 12* volts |
|---|---|
| 120 volts - 250 watts - ampoule T-4** | 75 watts |
| 120 volts - 100 watts - ampoule T-4** | 100 watts |
| 120 volts - 60 watts - ampoule PAR 16*** | *Transformateur néces |
| 12 volts - 100 watts - ampoule R-20*** | saire |
| 12 volts - 75 watts - ampoule MR-16** | **Modèles 120 volts** |
| ** AquaLight - *** SpaBrite | 60 watts, 100 watts |
| | 250 watts |

Tableau 1.

### ⚠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 installatateurs 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. Démonter l'appareil d'éclairage et retirer l'ampoule. Ôter le vieux joint et s'en débarrasser.

E. Lors de la repose de la lampe, installer un nouveau joint Pentair Water Pool and Spa référence 79108600.

F. Sélectionner 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. Rapprocher 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, introduire l'ampoule à travers l'ouverture en losange et la visser dans la douille.
4. Veiller à ne pas laisser l'ampoule entrer en contact avec la peau nue car cela risquerait d'en réduire la durée de service.

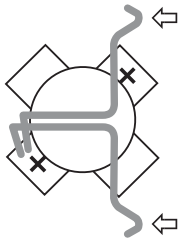


Figure 2.

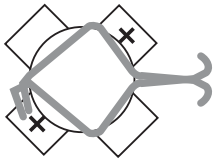


Figure 3.

## ⚠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.

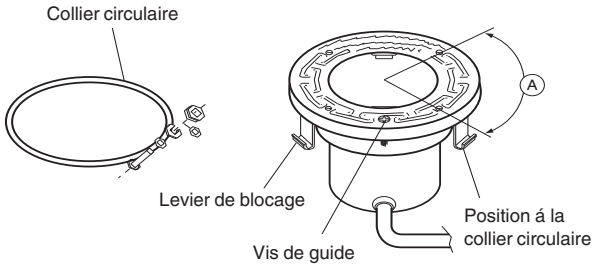



Figure 4.

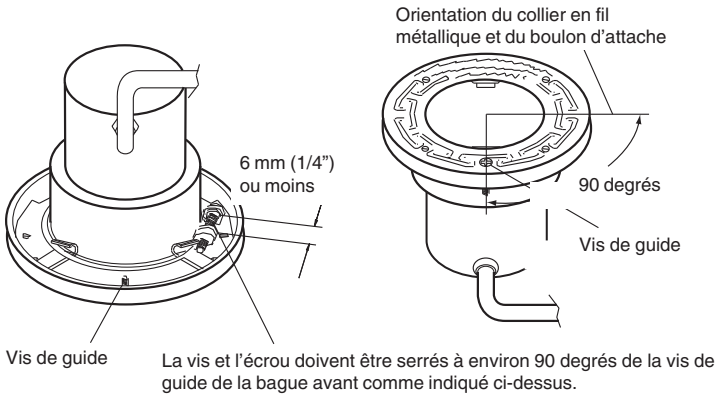
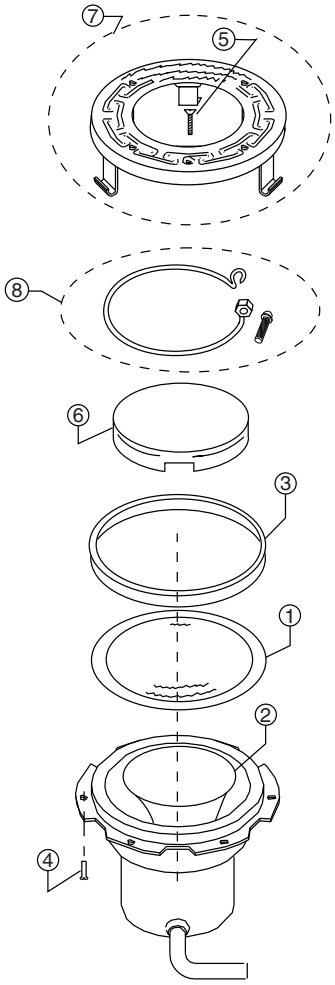



Figure 5.

## 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 |




# PRIÈRE DE LIRE ET DE CONSERVER CETTE NOTICE !



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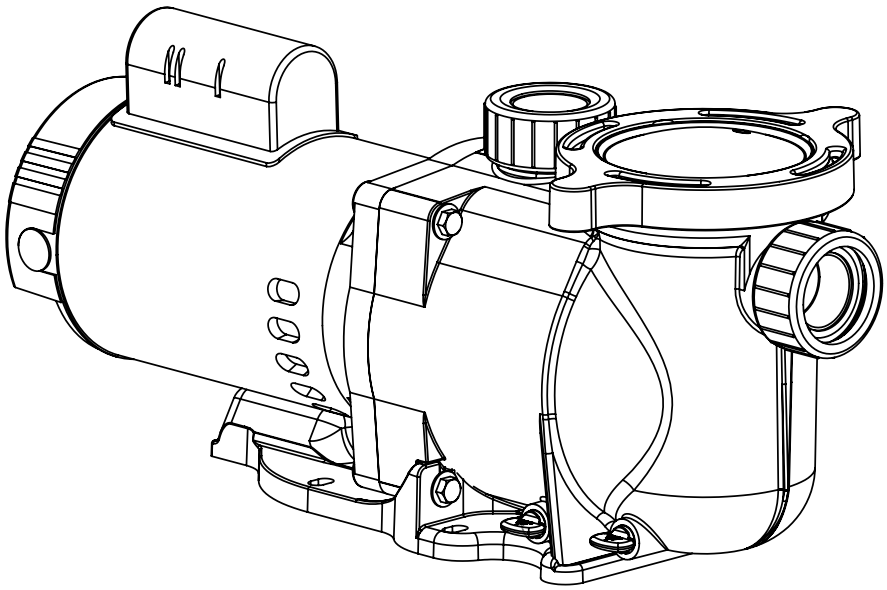
**Ce document est sujet à tous changements sans préavis.**

PENTAIR

# SUPERFLO®
## HIGH PERFORMANCE PUMP



# INSTALLATION AND USER'S GUIDE

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

## CUSTOMER SERVICE / TECHNICAL SUPPORT

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* to find more 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

## TABLE OF CONTENTS



** Translated versions of this manual are available online at / La versión en español de este manual del producto, se puede encontrar en línea a :* **http://www.pentairpool.com/products/pumps-inground-superflo-high-performance-pumps-165.htm**.

P/N 350096 Rev. G 1/19/16

# IMPORTANT PUMP WARNING AND SAFETY INSTRUCTIONS

## IMPORTANT NOTICE

This guide provides installation and operation instructions for this pump. Consult Pentair with any questions regarding this equipment.

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

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

### READ AND FOLLOW ALL INSTRUCTIONS SAVE THESE INSTRUCTIONS

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.

When installing and using this electrical equipment, basic safety precautions should always be followed, include the following:

**⚠ WARNING** Do not permit children to use this product.

**⚠ WARNING** **RISK OF ELECTRICAL SHOCK.** Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI.

**⚠ WARNING** This unit must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the pump without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Do not use this pump. Disconnect the pump and have the problem corrected by a qualified service representative before using.

**⚠ CAUTION** This pump is for use with permanent swimming pools and may also be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

**General Warnings**

- Never open the inside of the drive motor enclosure. There is a capacitor bank that holds a 230 VAC charge even when there is no power to the unit.
- The pump is not submersible.
- The pump is capable of high flow rates; use caution when installing and programming to limit pumps performance potential with old or questionable equipment.
- Code requirements for electrical connection differ from country to country, state to state, as well as local municipalities. Install equipment in accordance with the National Electrical Code and all applicable local codes and ordinances.
- Before servicing the pump; switch OFF power to the pump by disconnecting the main circuit to the pump.
- This appliance is not intended for use by persons (including children) of reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.

**⚠ DANGER** FAILURE TO FOLLOW ALL INSTRUCTIONS AND WARNINGS CAN RESULT IN SERIOUS BODILY INJURY OR DEATH. **THIS PUMP SHOULD BE INSTALLED AND SERVICED ONLY BY A QUALIFIED POOL SERVICE PROFESSIONAL. INSTALLERS, POOL OPERATORS AND OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS IN THE OWNER'S MANUAL BEFORE USING THIS PUMP. THESE WARNINGS AND THE OWNER'S MANUAL MUST BE LEFT WITH THE POOL OWNER.**

**⚠ DANGER** SUCTION ENTRAPMENT HAZARD: STAY OFF THE MAIN DRAIN AND AWAY FROM ALL SUCTION OUTLETS!

THIS PUMP PRODUCES HIGH LEVELS OF SUCTION AND CREATES A STRONG VACUUM AT THE MAIN DRAIN AT THE BOTTOM OF THE BODY OF WATER. THIS SUCTION IS SO STRONG THAT IT CAN TRAP ADULTS OR CHILDREN UNDER WATER IF THEY COME IN CLOSE PROXIMITY TO A DRAIN OR A LOOSE OR BROKEN DRAIN COVER OR GRATE.

THE USE OF UNAPPROVED COVERS OR ALLOWING USE OF THE POOL OR SPA WHEN COVERS ARE MISSING, CRACKED OR BROKEN CAN RESULT IN BODY OR LIMB ENTRAPMENT, HAIR ENTANGLEMENT, BODY ENTRAPMENT, EVISCERATION AND/OR DEATH.

The suction at a drain or outlet can cause:

**Limb Entrapment:** When a limb is sucked or inserted into an opening resulting in a mechanical bind or swelling. This hazard is present when a drain cover is missing, broken, loose, cracked or not properly secured.

**Hair Entanglement:** When the hair tangles or knots in the drain cover, trapping the swimmer underwater. This hazard is present when the flow rating of the cover is too small for the pump or pumps.

**Body Entrapment:** When a portion of the body is held against the drain cover trapping the swimmer underwater. This hazard is present when the drain cover is missing, broken or the cover flow rating is not high enough for the pump or pumps.

**Evisceration/Disembowelment:** When a person sits on an open pool (particularly a child wading pool) or spa outlet and suction is applied directly to the intestines, causing severe intestinal damage. This hazard is present when the drain cover is missing, loose, cracked, or not properly secured.

# IMPORTANT PUMP WARNING AND SAFETY INSTRUCTIONS

**Mechanical Entrapment:** When jewelry, swimsuit, hair decorations, finger, toe or knuckle is caught in an opening of an outlet or drain cover. This hazard is present when the drain cover is missing, broken, loose, cracked, or not properly secured.

**NOTE: ALL SUCTION PLUMBING MUST BE INSTALLED IN ACCORDANCE WITH THE LATEST NATIONAL AND LOCAL CODES, STANDARDS AND GUIDELINES.**

**⚠WARNING** TO MINIMIZE THE RISK OF INJURY DUE TO SUCTION ENTRAPMENT HAZARD:

- A properly installed and secured ANSI/ASME A112.19.8 approved anti-entrapment suction cover must be used for each drain.
- Each suction cover must be installed at least three (3') feet apart, as measured from the nearest point to nearest point.
- Regularly inspect all covers for cracks, damage and advanced weathering.
- If a cover becomes loose, cracked, damaged, broken or is missing, replace with an appropriate certified cover.
- Replace drain covers as necessary. Drain covers deteriorate over time due to exposure to sunlight and weather.
- Avoid getting hair, limbs or body in close proximity to any suction cover, pool drain or outlet.
- Disable suction outlets or reconfigure into return inlets.

**⚠WARNING** A clearly labeled emergency shut-off switch for the pump must be in an easily accessible, obvious place. Make sure users know where it is and how to use it in case of emergency.

**The Virginia Graeme Baker (VGB) Pool and Spa Safety Act** creates new requirements for owners and operators of commercial swimming pools and spas.

Commercial pools or spas constructed on or after December 19, 2008, shall utilize:

(A) A multiple main drain system without isolation capability with suction outlet covers that meet ASME/ANSI A112.19.8a Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs and either:

(i) A safety vacuum release system (SVRS) meeting ASME/ANSI A112.19.17 Manufactured Safety Vacuum Release systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems and/or ASTM F2387 Standard Specification for Manufactured Safety Vacuum Release Systems (SVRS) for Swimming pools, Spas and Hot Tubs or

(ii) A properly designed and tested suction-limiting vent system or

(iii) An automatic pump shut-off system.

Commercial pools and spas constructed prior to December 19, 2008, with a single submerged suction outlet shall use a suction outlet cover that meets ASME/ANSI A112.19.8a and either:

(A) A SVRS meeting ASME/ANSI A112.19.17 and/or ASTM F2387, or

(B) A properly designed and tested suction-limiting vent system, or

(C) An automatic pump shut-off system, or

(D) Disabled submerged outlets, or

(E) Suction outlets shall be reconfigured into return inlets.

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

**⚠CAUTION** 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.

**⚠DANGER** **HAZARDOUS PRESSURE: STAND CLEAR OF PUMP AND FILTER DURING START UP**

Circulation systems operate under high pressure. When any part of the circulating system (i.e. locking ring, pump, filter, valves, etc.) is serviced, air can enter the system and become pressurized. Pressurized air can cause the pump housing cover, filter lid, and valves to violently separate which can result in severe personal injury or death. Filter tank lid and strainer cover must be properly secured to prevent violent separation. Stand clear of all circulation system equipment when turning on or starting up pump.

Before servicing equipment, make note of the filter pressure. Be sure that all controls are set to ensure the system cannot inadvertently start during service. Turn off all power to the pump. **IMPORTANT: Place filter manual air relief valve in the open position and wait for all pressure in the system to be relieved.**

Before starting the system, fully open the manual air relief valve and place all system valves in the "open" position to allow water to flow freely from the tank and back to the tank. Stand clear of all equipment and start the pump.

**IMPORTANT: Do not close filter manual air relief valve until all pressure has been discharged from the valve and a steady stream of water appears.** Observe filter pressure gauge and be sure it is not higher than the pre-service condition.

**General Installation Information**

- All work must be performed by a qualified service professional, and must conform to all national, state, and local codes.
- Install to provide drainage of compartment for electrical components.
- These instructions contain information for a variety of pump models and therefore some instructions may not apply to a specific model. All models are intended for use in swimming pool applications. The pump will function correctly only if it is properly sized to the specific application and properly installed.

**⚠WARNING** Pumps improperly sized or installed or used in applications other than for which the pump was intended can result in severe personal injury or death. These risks may include but not be limited to electric shock, fire, flooding, suction entrapment or severe injury or property damage caused by a structural failure of the pump or other system component.

**⚠WARNING** The pump can produce high levels of suction within the suction side of the plumbing system. These high levels of suction can pose a risk if a person comes within the close proximity of the suction openings. A person can be seriously injured by this high level of vacuum or may become trapped and drown. It is absolutely critical that the suction plumbing be installed in accordance with the latest national and local codes for swimming pools.

Warnings and safety instructions for Pentair Aquatic Systems pumps and other related products are available at: **http://www.pentairpool.com/pool-owner/safety-warnings/** or call (800) 831-7133 for additional free copies of these instructions.

Please refer to **http://www.pentairpool.com/pool-owner/safetywarnings/** for warning and safety instructions related to the this product.

# SAVE THESE INSTRUCTIONS

Warning Page P/N 352557 Rev. A 6/15

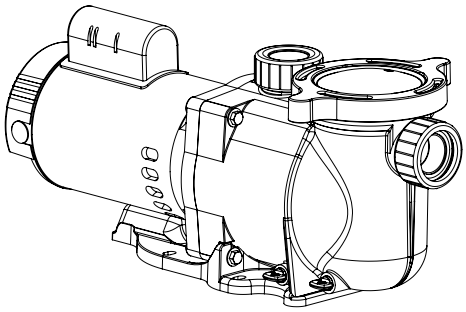
# PUMP 0VERVIEW

## Pump Overview

The perfect choice for all types of pools, the SuperFlo® High Performance Pump was specifically designed to be your best choice for a variety of inground pools.

Thick walled body parts, a heavy duty 56 square flange motor, and highly engineered hydraulics make this rugged and tested design perfect for any pool, spa, water feature, or fountain.

All pumps from Pentair Aquatic Systems incorporate innovative hydraulic engineering that has been refined for over 40 years. Compact, rugged, and easy to maintain, the SuperFlo pump will deliver years of reliable service.



SuperFlo High Performance Pump

## General Features

- Extremely quiet operation
- Unionized fittings (1.5” and 2”) for simple replacement
- Cam and Ramp™ Lid for easy cleaning and maintenance
- Heavy-duty, high service factor 56 square flange motor for long life
- Integral volute and pot reduce hydraulic noise
- See-through lid permits easy inspection of strainer basket
- 115 volt or 230 volt models available
- 1/2 HP to 2 1/2 HP configurations to accommodate a wide range of applications
- Self-priming for quick, easy start-up

# INSTALLATION

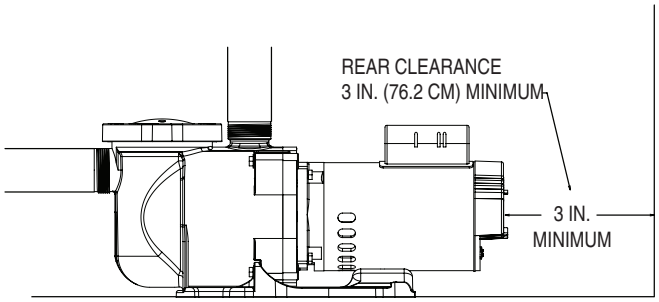
Only a qualified plumbing professional should install the SuperFlo® High Performance Pump. Refer to *"Pump Warning And Safety Instructions"* on pages ii-iii for additional installation and safety information.

## Location

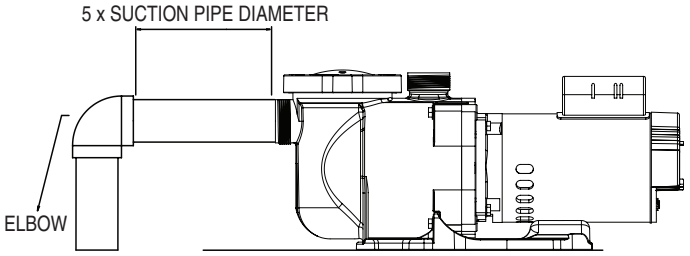
Be sure the pump location meets the following requirements:

**Note:** Do not install this pump within an outer enclosure or beneath the skirt of a hot tub or spa unless marked accordingly.

1. Install the pump as close to the pool or spa as possible. To reduce friction loss and improve efficiency, use short, direct suction piping returns.
2. Install a minimum of 5 feet (1.52 meters) from the inside wall of the pool and spa. Canadian installations require a minimum of 9.8 feet (3 meters) from pool water level.
3. Install the pump a minimum of 3 feet (.9 meters) from the heater outlet.
4. Do not install the pump more than 10 feet (3 meters) above the water level.
5. Install the pump in a well ventilated location protected from excessive moisture (i.e., rain gutter downspouts, sprinklers, etc.)
6. Install the pump with a rear clearance of at least 3 inches (76.2 mm) so that the motor can be removed easily for maintenance and repair.




Pump Rear Clearance




Recommended Piping

## Piping

1. For improved pool plumbing, it is recommended to use a larger pipe size. When installing the inlet and outlet fittings (male adaptors), use thread sealant.
2. Piping on the suction side of the pump should be the same or larger than the return line diameter.
3. Plumbing on the suction side of the pump should be as short as possible.
4. For most installations Pentair recommends installing a valve on both the pump suction and return lines so that the pump can be isolated during routine maintenance. However, we also recommend that a valve, elbow or tee installed in the suction line should be no closer to the front of the pump than five (5) times the suction line diameter.

   **Example:** A 2 inch pipe requires a 10 inch (25.4 cm) straight run in front of the suction inlet of the pump. This will help the pump prime faster and last longer.

   **Note:** DO NOT install 90° elbows directly into the pump inlet or outlet.

## Fittings and Valves

1. Do not install 90° elbows directly into pump inlet.
2. Flooded suction systems should have gate valves installed on suction and discharge pipes for maintenance, however, the suction gate valve should be no closer than five times the suction pipe diameter as described in this section.
3. Use a check valve in the discharge line when using this pump for any application where there is significant height to the plumbing after the pump.
4. Be sure to install check valves when plumbing in parallel with another pump. This helps prevent reverse rotation of the impeller and motor.

**⚠WARNING** **RISK OF ELECTRICAL SHOCK OR ELECTROCUTION.** This pump must be installed by a licensed or certified electrician or a qualified service professional 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 users, installers, or others due to electrical shock, and may also cause damage to property.

**Always disconnect power to the pump at the circuit breaker before servicing the pump. Failure to do so could result in death or serious injury to service people, pool users or others due to electric shock and/or property damage.**
Read all servicing instructions before working on the pump.

## Electrical Wiring Installation

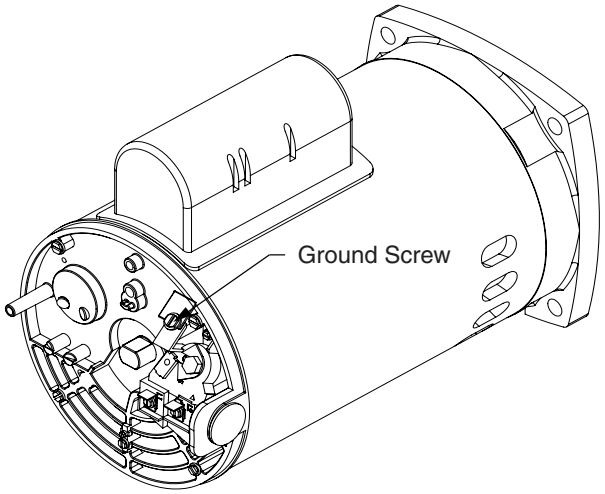
1. Be sure all electrical breakers and switches are turned off before wiring motor.
2. Be sure that the wiring voltage matches the motor voltage (230 VAC or 115 VAC). If they do not match, the motor can overheat.
3. Use the correct wire size and type specified by the current National Electrical Code. When in doubt use a heavier gauge (larger diameter) wire. Heavier gauge will allow the motor to run cooler and more efficient.
4. Be sure all electrical connections are clean and tight.
5. Cut wires to the appropriate length so they do not overlap or touch when connected to the terminal board.
6. Permanently ground the motor using the green ground terminal located on the inside of the motor canopy or access plate, see image. Use the correct wire size and type specified by the current National Electrical Code. Be sure the ground wire is connected to an electrical service ground.
7. Bond the motor to the pool structure in accordance with the current National Electrical Code. UL requires use of a solid copper bonding conductor not smaller than 8 AWG.

***Note:*** When pump is mounted permanently within 5 ft. (1.52 meters) of the inside walls of a swimming pool, you must use a No. 8 AWG or larger conductor to connect to bonding conductor lug.

*Pentair offers 2-Pole 20 Amp GFCI breakers (P/N PA220GF) which offer 6 milliamp personnel protection while meeting 2008 to current NEC Standards for Pool Pumps.*

8. Connect the wire from the accessible wire connector on the motor to all metal parts of the swimming pool, spa, or hot tub structure and to all electrical equipment, metal conduit, and metal piping within 5 feet (1.52 meters) of the inside walls of the swimming pool, spa, or hot tub. For Canada, a 6 AWG or larger solid copper bonding conductor is required.
9. The pump should be permanently connected to either a circuit breaker, 2-pole timer or 2-pole relay. If AC power is supplied by a GFCI circuit breaker, use a dedicated circuit breaker that has no other electrical loads.
10. Connect the pump permanently to a circuit. Make sure no other lights or appliances are on the same circuit.

***Note:*** When the pump is started and stopped by removing power with a relay or timer, a two-pole device should be used to apply and remove power to both POWER LINE TERMINALS.




Field Wiring Compartment

# MAINTENANCE

**⚠WARNING** DO NOT open the strainer pot if pump fails to prime or if pump has been operating without water in the strainer pot. Pumps operated in these circumstances may experience a build up of vapor pressure and may contain scalding hot water. Opening the pump may cause serious personal injury. In order to avoid the possibility of personal injury, make sure the suction and discharge valves are open and strainer pot temperature is cool to touch, then open with extreme caution.

**⚠CAUTION** To prevent damage to the pump and for proper operation of the system, clean pump strainer and skimmer baskets regularly.

## Pump Strainer Basket

The pump strainer basket (or 'strainer pot', 'hair and lint pot'), is located in front of the volute. Inside the chamber is the basket which must be kept clean of leaves and debris at all times. View basket through the 'See Through Lid' to inspect for leaves and debris.

Regardless of the length of time between filter cleaning, it is most important to visually inspect the basket at least once a week. A dirty basket will reduce the efficiency of the filter and heater and also put an abnormal stress on the pump motor which would result in a costly repair bill.

### Cleaning the Pump Strainer Basket

1. Turn off the pump at the circuit breaker.
2. Relieve pressure in the system by allowing the water to cool.
3. Gently tap the clamp in a counter-clockwise direction to remove the clamp and lid.
4. Remove debris and rinse out the basket. Replace the basket if it is cracked.
5. Put the basket back into the housing. Be sure to align the notch in the bottom of the basket with the rib in the bottom of the volute.
6. Fill the pump pot and volute up to the inlet port with water.
7. Clean the cover, O-ring, and sealing surface of the pump pot. ***Note:*** It is important to keep the lid O-ring clean and well lubricated.
8. Reinstall the lid by placing the lid on the pot. Be sure the lid O-ring is properly placed. Seat the clamp and lid on the pump then turn clockwise until the handles are horizontal.
9. Turn the power "ON" at the house circuit breaker. Reset the pool time clock to the correct time.
10. Open the High Flow manual air relief valve on top of the filter.
11. Stand clear of the filter. Start the pump.
12. Bleed air from the filter until a steady stream of water comes out. Close the High Flow™ Manual Air Relief Valve.

**⚠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 above instructions.

## Winterizing

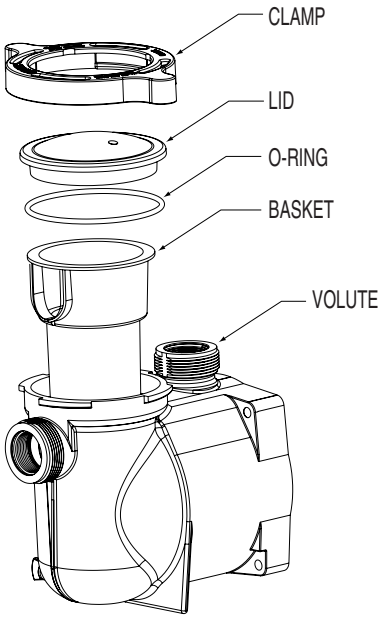
You are responsible for determining when freezing conditions may occur. If freezing conditions are expected, take the following steps to reduce the risk of freeze damage. ***Freeze damage is not covered under warranty.***

To prevent freeze damage, follow the procedures below:

1. Shut off electrical power for the pump at the circuit breaker.
2. Drain the water out of the pump housing by removing the two thumb-twist drain plugs from the housing. Store the plugs in the pump basket.
3. Cover the motor to protect it from severe rain, snow and ice.

***Note:*** Do not wrap motor with plastic or other air tight materials during winter storage. The motor may be covered during a storm, winter storage, etc., but never when operating or expecting operation.

In mild climate areas, when temporary freezing conditions may occur, run your filtering equipment all night to prevent freezing.




Strainer Pot Assembly

# SERVICING

**⚠WARNING** Always disconnect power to the pump at the circuit breaker and disconnect the communication cable before servicing the pump. Failure to do so could result in death or serious injury to service people, users or others due to electric shock. Read all servicing instructions before working on the pump.

**⚠WARNING** **DO NOT** open the strainer pot if pump fails to prime or if pump has been operating without water in the strainer pot. Pumps operated in these circumstances may experience a build up of vapor pressure and may contain scalding hot water. Opening the pump may cause serious personal injury. In order to avoid the possibility of personal injury, make sure the suction and discharge valves are open and strainer pot temperature is cool to touch, then open with extreme caution.

**⚠CAUTION** Be sure not to scratch or mar the polished shaft seal faces; seal will leak if faces are damaged. The polished and lapped faces of the seal could be damaged if not handled with care.

## Care of Electric Motor

### Protect from heat

1. Shade the motor from the sun.
2. Any enclosure must be well ventilated to prevent overheating.
3. Provide ample cross ventilation.

### Protect against dirt

1. Protect from any foreign matter or splashing water.
2. Do not store (or spill) chemicals on or near the motor.
3. Protect from any foreign matter or splashing water.
4. Avoid sweeping or stirring up dust near the motor while it is operating.
5. If a motor has been damaged by dirt it voids the motor warranty.
6. Clean the lid and clamp, O-ring, and sealing surface of the pump pot.

### Protect against moisture

1. Protect from splashing or sprayed water.
2. Protect from extreme weather.
3. Protect from any foreign matter or splashing water.
4. If a motor has become wet - let it dry before operating. Do not allow the pump to operate if it has been flooded.
5. If a motor has been damaged by water it voids the motor warranty.

***Note:*** When replacing the motor, be certain that the motor support is correctly positioned to support the size of motor being installed.

## Shaft Seal Replacement

The Shaft Seal consists primarily of two parts, a rotating member and a ceramic seal.

The pump requires little or no service other than reasonable care, however, a Shaft Seal may occasionally become damaged and must be replaced.

***Note:*** The polished and lapped faces of the seal could be damaged if not handled with care.

## Pump Disassembly

All moving parts are located in the rear sub-assembly of this pump.

Tools required:

- 1/4 inch socket or open end wrench.
- 9/16 inch open end wrench.
- 1/2 inch or 7/16 inch open end wrench
- Flat blade screwdriver.

To remove and repair the motor subassembly, follow the steps below:

1. Turn off the pump circuit breaker at the main panel.
2. Drain the pump by removing the drain plugs.
3. Remove the 4 bolts that hold the main pump body (strainer pot/volute) to the rear sub-assembly.
4. GENTLY pull the two pump halves apart, removing the rear sub-assembly.
5. Remove the three hex head screws holding the diffuser in position.
6. Hold the impeller securely in place and remove the impeller lock screw by using a flat blade screwdriver or wrench. The screw is a left-handed thread and loosens in a clockwise direction.
7. Remove the shaft cap located at the back of the motor and hold the shaft secure with a 1/2 inch (Century® motors) or 7/16 inch (Franklin Electric® Motors) open-end wrench. On AO Smith® motors, remove the motor canopy, move the capacitor to one side and hold the shaft with a 7/16 inch open-end wrench.
8. To unscrew the impeller from the shaft, twist the impeller counter-clockwise.
9. Remove the four bolts from the seal plate to the motor using a 9/16 inch wrench.
10. Place the seal plate face down on a flat surface and tap out the ceramic seal.
11. Clean the seal plate, seal housing, and the motor shaft.

**⚠CAUTION** **DO NOT run the pump dry.** If the pump is run dry, the mechanical seal will be damaged and the pump will start leaking. If this occurs, the damaged seal must be replaced. ALWAYS maintain proper water level. If the water level falls below the suction port, the pump will draw air through the suction port, losing the prime and causing the pump to run dry, resulting in a damaged seal. Continued operation in this manner could cause a loss of pressure, resulting in damage to the pump case, impeller and seal and may cause property damage and personal injury.

## Pump Reassembly

1. When installing the replacement seal into the seal plate, use soapy water to wet the rubber boot before pressing it into the seal plate.
2. Remount the seal plate to the motor.
3. Before installing the rotating portion of the seal on the motor shaft, wet the motor shaft with soapy water and slide the seal onto the motor shaft. Ensure that the carbon face contacts the ceramic face of the stationary seat. Press the seal into the seal plate with your thumbs and wipe off the ceramic with a clean cloth.
4. Grease the motor shaft thread and screw impeller onto the motor shaft.
5. Screw in the impeller lock screw (counter-clockwise to tighten).
6. Remount the diffuser onto the seal plate. Make sure the plastic pins and holding screw inserts are aligned.
7. Grease the diffuser quad ring and seal plate O-ring prior to reassembly.
8. Grease the bolt threads, assemble the motor sub-assembly to the strainer pot-pump body by using the two through bolts for proper alignment. Do not tighten the through bolts until all 4 bolts are in place and finger tightened.
9. Fill the pump with water.
10. Reinstall the pump lid and plastic clamp; see the next section, ‘Restart Instructions’.
11. Reprime the system.

## Restart Instructions

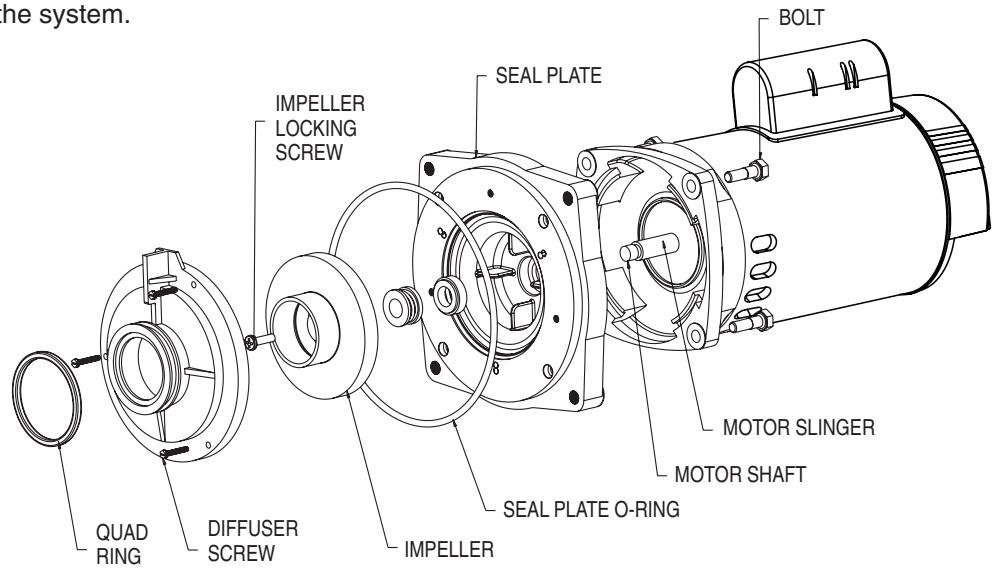
If pump is installed below the water level of the pool, close return and suction lines prior to opening hair and lint pot on pump. Make sure to re-open valves prior to operating.

### Priming the Pump

The pump strainer pot must be filled with water before the pump is initially started.

Follow these steps to prime the pump:

1. Remove the pump lid plastic clamp. Remove the pump lid.
2. Fill the pump strainer pot with water.
3. Reassemble the pump cover and plastic clamp onto the strainer pot. The pump is now ready to prime.
4. Open the air release valve on the filter, and stand clear of the filter.
5. Turn on the switch or time clock.
6. When water comes out of the air release valve, close the valve. The system should now be free of air and recirculating water to and from the pool.
7. For 2-speed pumps:
   - Pump should run on high-speed for priming.
   - The pump should not run longer than 8 minutes before priming is achieved.



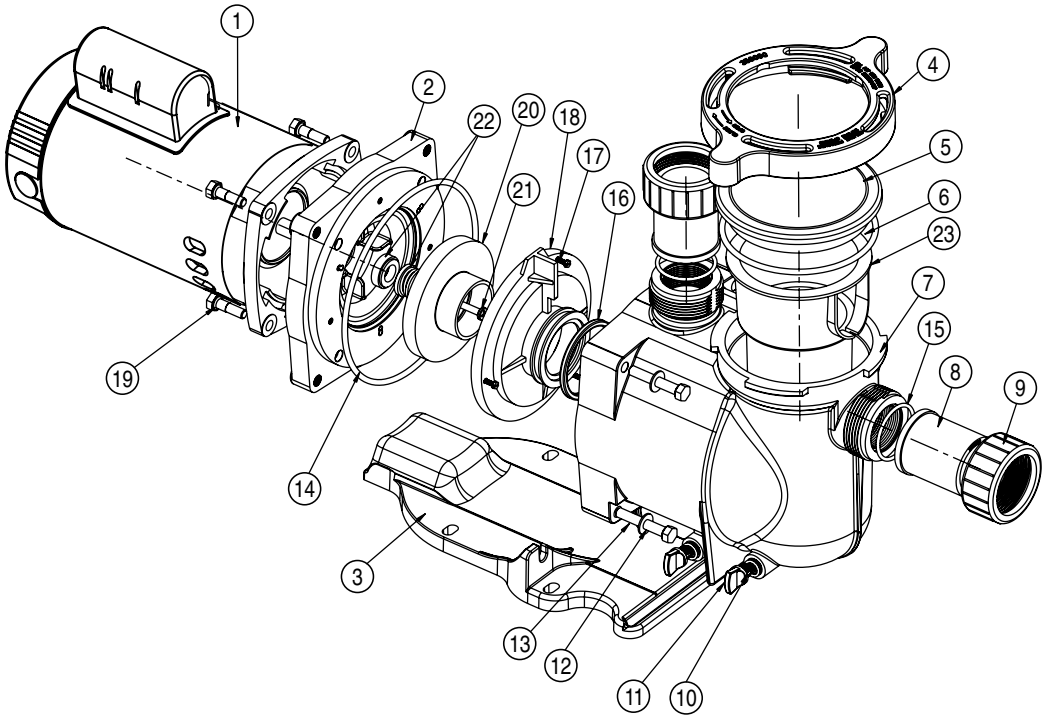

Motor Assembly

# TROUBLESHOOTING

| Problem | Possible Cause | Corrective Action |
|---|---|---|
| **Pump failure.** | Pump will not prime - Air leak, too much air. | Check suction piping and valve glands on any suction gate valves. Secure lid on pump strainer pot and be sure lid gasket is in place. Check water level to be sure skimmer is not drawing air. |
| | Pump will not prime - Not enough water. | Be sure the suction lines, pump, strainer, and pump volute are full of water. Be sure valve on suction line is working and open (some systems do not have valves). Check water level to make sure water is available through skimmer. |
| | Pump stainer gasket is clogged. | Clean pump strainer pot. |
| | Pump strainer gasket is defective. | Replace gasket. |
| **Reduced capacity and/or head.** | Air pockets or leaks in suction line. | Check suction piping and valve glands on any suction gate valves. Secure lid on pump strainer pot and be sure lid gasket is in place. Check water level to be sure skimmer is not drawing air. |
| | Clogged impeller. | Turn off electrical power to the pump.<br>Disassemble (see page 5, 'Pump Disassembly') |
| | | Clean debris from impeller. If debris cannot be removed, complete the following steps:<br>1. Remove left hand thread anti-spin bolt and o-ring.<br>2. Remove, clean, and reinstall impeller.<br>Reassemble (see page 6, 'Pump Reassembly') |
| | Pump strainer clogged. | Clean suction trap. |

# REPLACEMENT PARTS

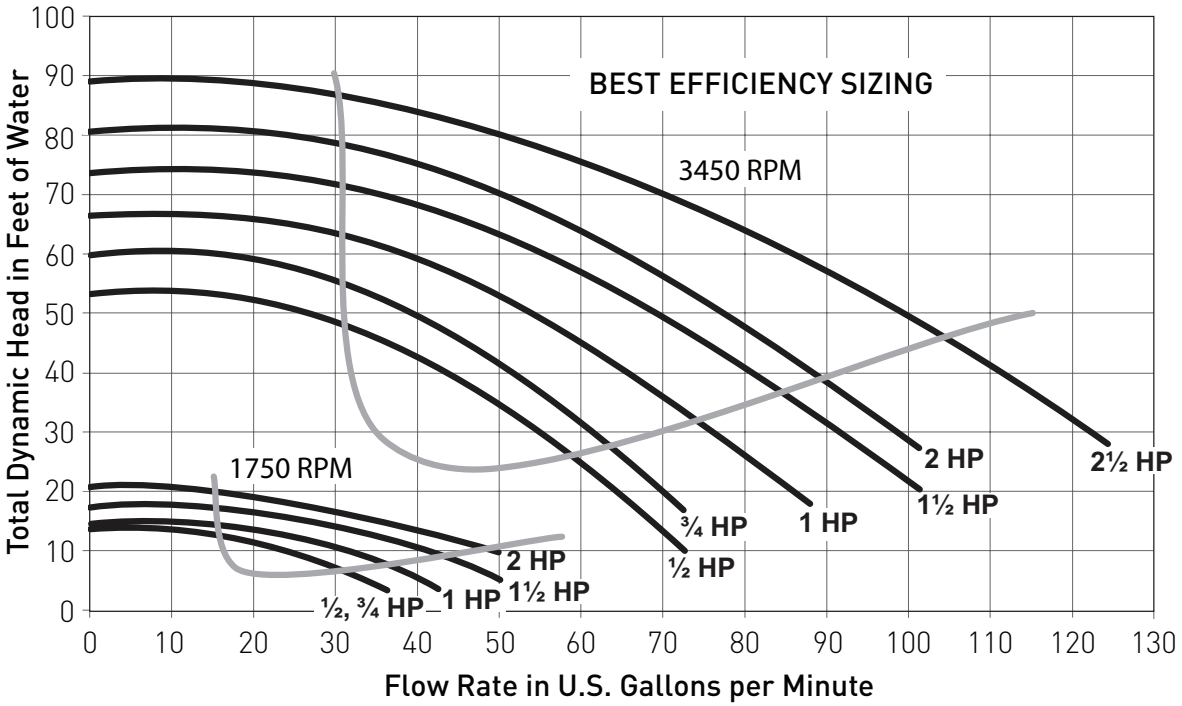
**SuperFlo® High Performance Pump Parts List**




| Item No. | Part No. | Description |
|---|---|---|
| ***SINGLE* SPEED SUPERFLO MOTORS** | | |
| 1 | 355018S | **½, ¾ HP** — (Almond) |
| 1 | 355020S | **1 HP** — (Almond) |
| 1 | 355022S | **1½ HP** — (Almond) |
| 1 | 355024S | **2 HP** — (Almond) |
| 1 | 355026S | **2½ HP** — (Almond) |
| ***DUAL* SPEED SUPERFLO MOTORS** | | |
| 1 | 350088S | **¾ HP 115 VOLTAGE** — (Almond) |
| 1 | 355003S | **1 HP** — (Almond) |
| 1 | 356630S | **1½ HP** — (Almond) |
| 1 | 071320S | **2 HP** — (Almond) |
| ***ENERGY EFFICIENT* SUPERFLO MOTORS** | | |
| 1 | 355008S | **½, ¾, 1 HP** — (Almond) |
| 1 | 355010S | **1½ HP** — (Almond) |
| 1 | 355012S | **2 HP** — (Almond) |
| 1 | 355014S | **2½ HP** — (Almond) |
| 2 | 356012 | SEAL PLATE |
| 3 | 350094 | BASE |
| 4 | 350090 | CLAMP, RAMP & CAM |
| 5 | 350091 | LID |
| 6 | 357255 | O-RING, LID #2-357 |
| 7 | 350089 | VOLUTE |
| 8 | 350093 | ADAPTER, 2 req. |
| 9 | 350092 | NUT, 2 req. |
| 10 | 192115 | O-RING DRAIN PLUG, 2 req. |
| 11 | 071131 | DRAIN PLUG, 2 req. |

| Item No. | Part No. | Description |
|---|---|---|
| 12 | 355621 | SCREW ¾-16 X 2¼ HEX HD, 4 req. |
| 13 | 072184 | WASHER 3/8 in. S/S, 4 req. |
| 14 | 355619 | O-RING SEAL BRACKET |
| 15 | 6020018 | O-RING ADAPTER #2-226, 2 req. |
| 16 | 355030 | SEAL DIFFUSER |
| 17 | 355334 | SCREW #8-32 HEX WASHER HD, 3 req. |
| 18 | 355617 | DIFFUSER - ½ HP |
| 18 | 355617 | DIFFUSER - ¾ HP |
| 18 | 355617 | DIFFUSER - 1 HP |
| 18 | 355618 | DIFFUSER - 1½ HP |
| 18 | 355618 | DIFFUSER - 2 HP |
| 18 | 350170 | DIFFUSER - 2½ HP |
| 19 | U30-74SS | HEX HEAD SCREW 3/8 - 16, 4 req. |
| 20 | 355043 | IMPELLER ½ HP |
| 20 | 355043 | IMPELLER ¾ HP |
| 20 | 355067 | IMPELLER 1 HP |
| 20 | 355074 | IMPELLER 1½ HP |
| 20 | 355086 | IMPELLER 2 HP |
| 20 | 355093 | IMPELLER 2½ HP |
| 20 | 355067 | IMPELLER 1 HP, 2-SPD |
| 20 | 355074 | IMPELLER 1½ HP, 2-SPD |
| 20 | 355086 | IMPELLER 2 HP, 2-SPD |
| 21 | 355389 | SCREW, IMPELLER LOCKING |
| 22 | 354545S | SEAL SET |
| 23 | 355667 | BASKET, LARGE |
| 24 | 350157 | KIT UNION SUPERFLO (Items No. 8, 9, 15) |

## Pump Performance Curves



# NOTES

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