



ColorLogic® Bubbler

Owner's Manual



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WFBCUS1100
WFB100

**REGISTER
NOW**

to extend your
WARRANTY

see back of manual for details

Hayward Industries
400 Connell Drive, Suite 6100
Berkeley Heights, NJ 07922
Phone: (908) 355-7995
www.hayward.com



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IMPORTANT SAFETY INSTRUCTIONS

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



READ AND FOLLOW ALL INSTRUCTIONS

▲ 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 – ELECTRIC SHOCK HAZARD. MOUNTING A LUMINAIRE THAT REQUIRES BONDING OR GROUNDING IN THIS NICHE CAN CAUSE SEVERE INJURY AND/OR DEATH. DO NOT MOUNT NON-UL LISTED LIGHTS OR ANY LUMINAIRE THAT REQUIRES BONDING OR GROUNDING IN THIS NICHE.



▲ WARNING – Risk of Electric Shock. Hazardous voltage can shock, burn, and cause death or serious property damage. All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electrical Code (NEC). 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 – Risk of Electric Shock. Opening light can cause shock, burn and severe injury. Light has no user serviceable parts inside. Do not open light.

▲ NOTICE – This swimming pool product is UL listed for permanently installed pools or spas only. It is not listed for storable pools or spas. Permanently installed pools and spas are those constructed in or partially in the ground and all others capable of holding water in a depth greater than 42 in (1.07 m). Storable pools and spas are those constructed on or above the ground and capable of holding water to a maximum of 42 in (1.07 m).



▲ WARNING – Electrical shock hazard. Damage to wiring can cause severe injury or death. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment.

SAVE THESE INSTRUCTIONS



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Before You Begin

The Hayward WFB100 ColorLogic® Bubbler has been designed for use with all Hayward Accent Lights and provides lighted water for small fountains and other water effects. The ColorLogic Bubbler must be installed as specified by these instructions. Please follow ALL of the instructions enclosed with this unit. It is recommended to keep the unit in its original packaging until the site is prepared for installation.

Compatibility

The Hayward WFB100 ColorLogic Bubbler is compatible with the following Hayward ColorLogic 320 and 160 Accent Light models:

LACUS11xxx
LYCUS11xxx
LACUN11xxx
LYCUN11xxx
LAWUS11xxx
LYWUS11xxx

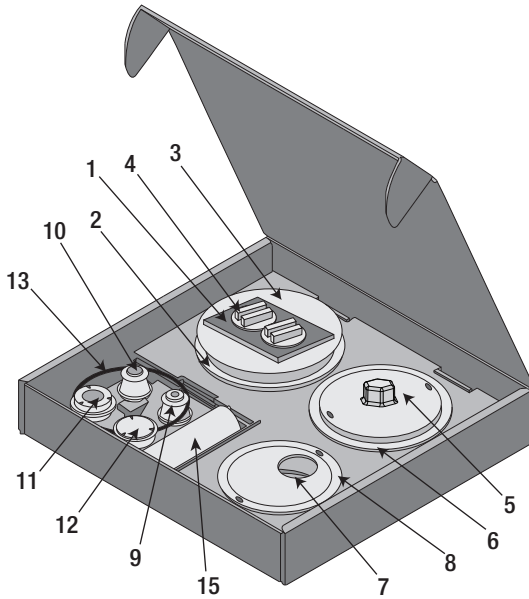
Note that the WFBCUS1100 version comes packaged with one ColorLogic 320 Accent Light with a 100' cord.

What's Included

Refer to the image and the table on the following page for a list of all items included with the Hayward WFB100 ColorLogic Bubbler.



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| ITEM NO. | DESCRIPTION | QTY. |
|-----------------|--|------|
| 1 | Bubbler Pipe Guide, Chipboard | 1 |
| 2 | Housing | 1 |
| 3 | Gunite Shield | 1 |
| 4 | 1-1/2" Threaded Plug with O-Ring | 2 |
| 5 | Plaster Shield | 1 |
| 6 | Plaster Ring | 1 |
| 7 | Lens | 1 |
| 8 [†] | Retaining Ring | 1 |
| 9 [†] | ColorLogic Bubbler Nozzle, 1/2" | 1 |
| 10 [†] | ColorLogic Bubbler Nozzle, 3/4" | 1 |
| 11 [†] | ColorLogic Bubbler Nozzle Nut | 1 |
| 12* | ColorLogic Bubbler Nozzle Threaded Plug | 1 |
| 13* | Plaster Shield O-Ring (For Winterization Only) | 1 |
| 14* | O-Ring For Nozzle and Plug | 2 |
| 15* | ColorLogic Bubbler Tool | 1 |
| 16* | Rubber Extender Nozzle | 1 |

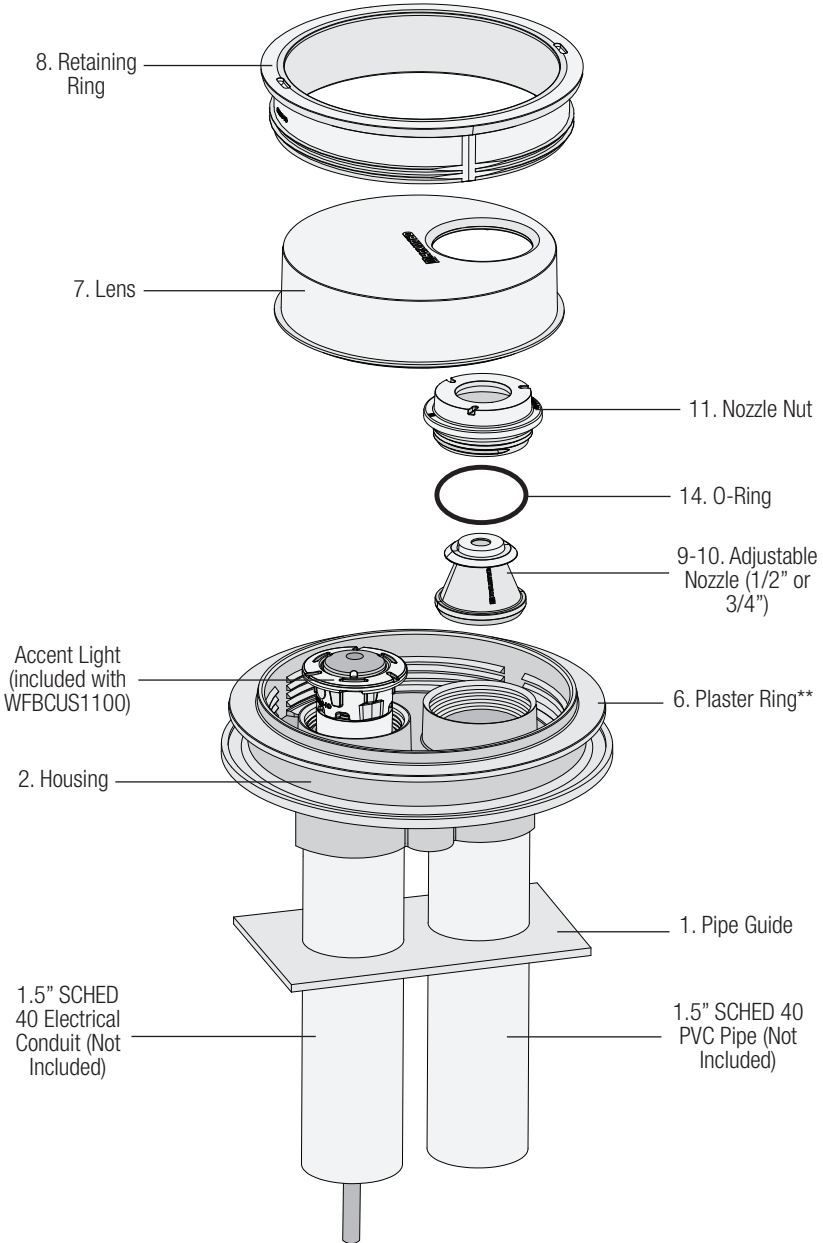
*Comes in plastic bag

[†]Alternate colors available (see page 15 or visit hayward.com for details)



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Exploded View



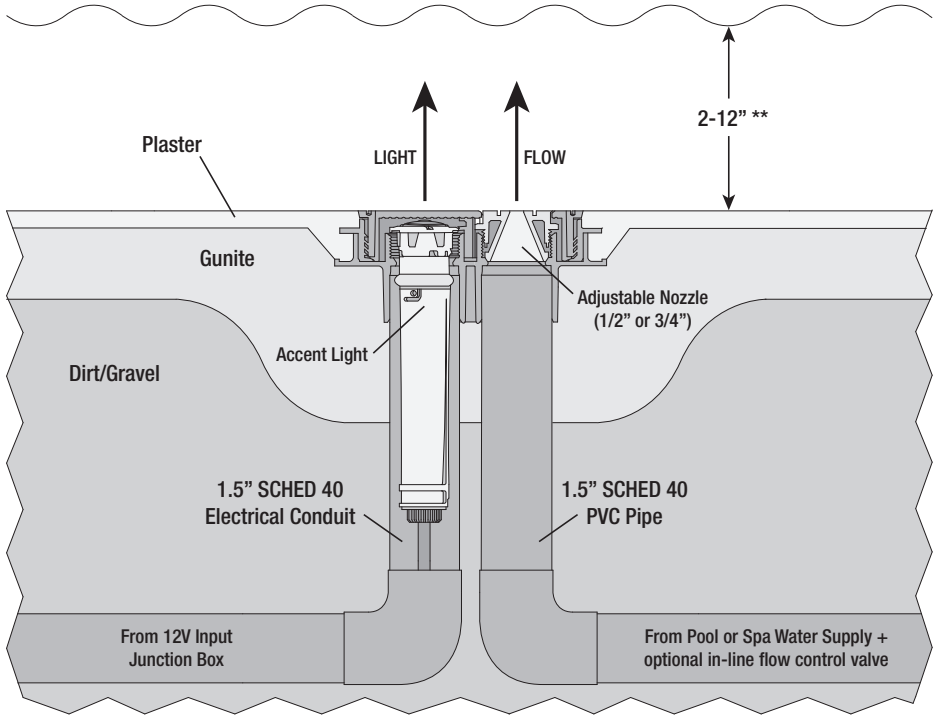
**Plaster Ring only adjustable during Installation.



Installation

System Overview

The diagram below shows an overview of a fully installed ColorLogic Bubbler system.



****Hayward recommends mounting the ColorLogic Bubbler no more than 12" below the surface of the water when installed as a bubbler/fountain for the best combination of water and light.**

Determine the location for the ColorLogic Bubbler. Rough-in plumbing pipe and electrical conduit by plumbing the water line to the desired pumping system and the electrical line to the Accent Light junction box as shown above. It is recommended that you use 1.5" SCHED 40 Electrical Conduit for the electrical line. Use the provided pipe guide to ensure proper distance from the plumbing and electrical pipes (as shown on page 8). Keep the pipe guide on the pipes to make installation of the housing easier later on. If you have lost or discarded the pipe guide, note that the distance between the centers of each pipe should be exactly 2.5".

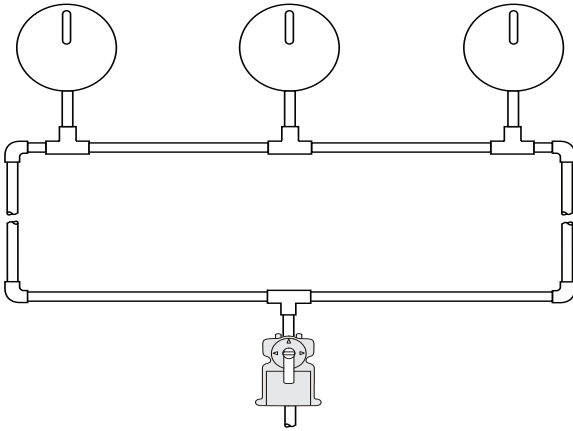
NOTE: If finite control will be desired, be sure to install an in-line flow control valve to adjust the height and flow of the water stream from the ColorLogic Bubbler.



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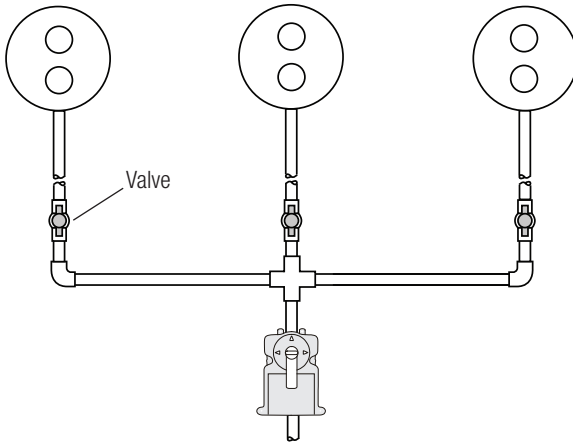
Plumbing

Use the looped plumbing scheme below if multiple bubblers will be installed at the same depth.



From Pool or Spa Water Supply

Use the plumbing scheme below with individual valves if bubblers will be installed at different depths.



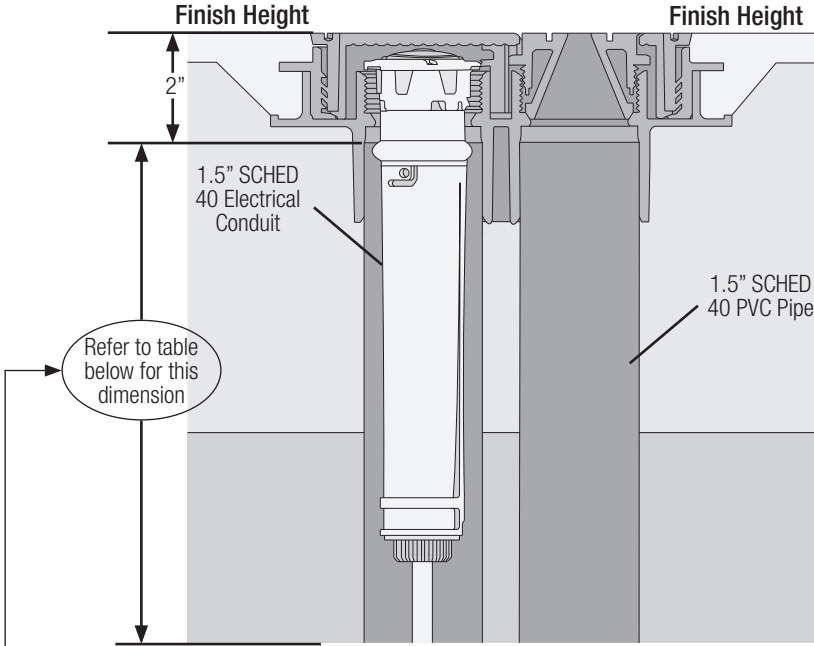
From Pool or Spa Water Supply



Installation Steps

Follow the steps below to ensure proper installation of the ColorLogic Bubbler.

1. Cut the two pieces of 1.5" pipe to no less than 2" and no more than 2.125" beneath the surface level to ensure proper final installation height. Refer to the diagram and table below for minimum clearance height if accent lighting is desired. If lighting will not be used, it is recommended that you still leave enough room in case of a future upgrade.

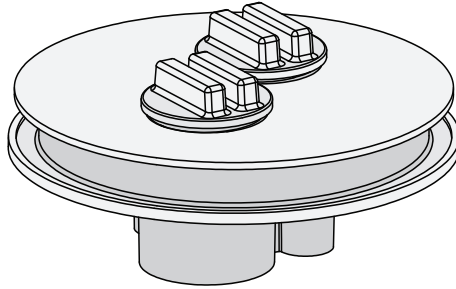


| Light | Clearance Requirements |
|----------------------------|------------------------|
| No luminaire | Not Applicable |
| ColorLogic 320 standalone | 8" |
| ColorLogic 160 standalone | 8" |
| CrystaLogic 320 standalone | 8" |
| CrystaLogic 160 standalone | 8" |
| ColorLogic 320 network | 10" |
| ColorLogic 160 network | 10" |

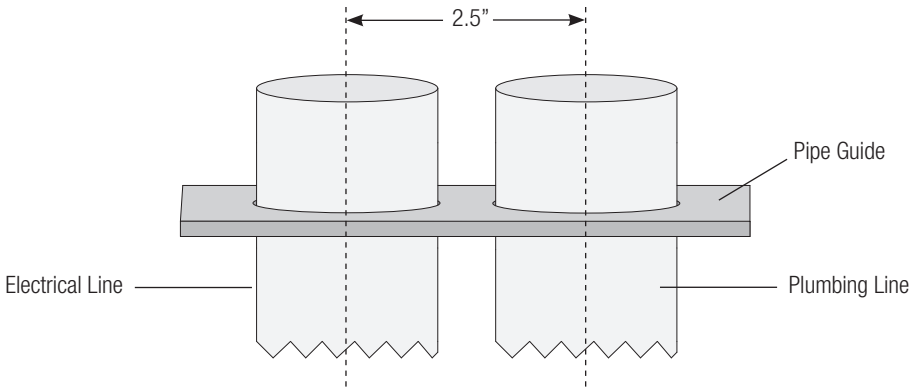


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2. Remove the following parts from the box: Housing, Gunite Shield, and 2 Threaded Plugs. These parts come assembled together as shown below. **DO NOT DISASSEMBLE.**



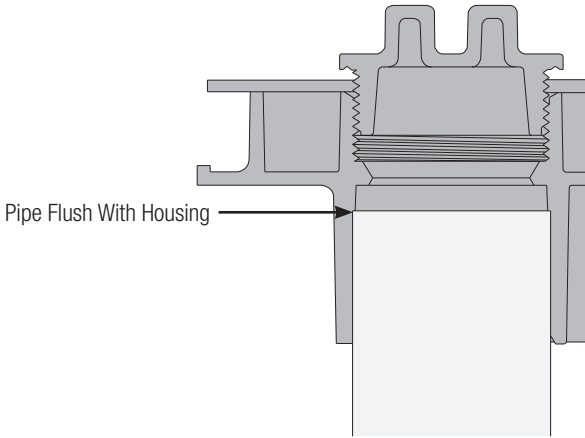
3. Verify that the pipe guide is on the 2 pipes to ensure proper distance between them (as seen below). If the guide is not on the pipes, put it on now to make the next step easier.



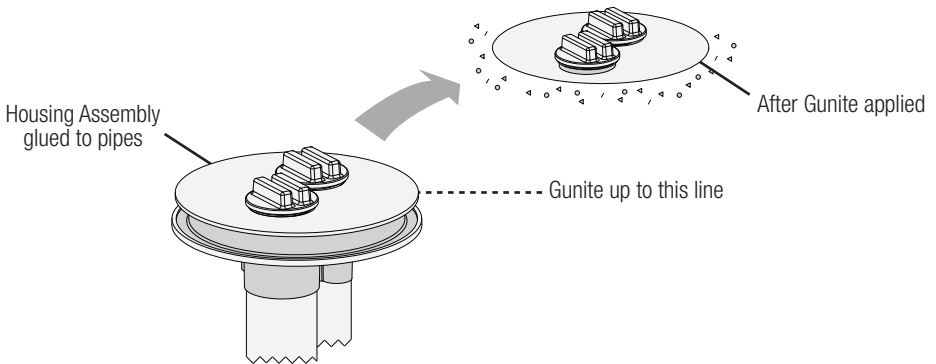


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4. Glue the housing assembly to the two pipes as shown below. Note that the ports are reversible so it does not matter which one is used for the electrical line or the plumbing line. Verify that the housing is fully installed to ensure flush installation to the surface level. Remove the pipe guide.



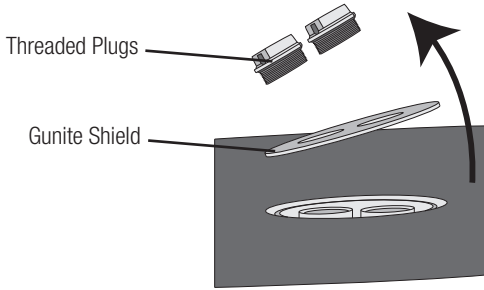
5. Backfill the pit beneath the housing with dirt and/or gravel to about halfway up the pipes. The System Overview diagram on page 5 shows the approximate level of the dirt/gravel.
6. Apply gunite and fill behind the housing up to the level shown in the System Overview diagram on page 5 and below.





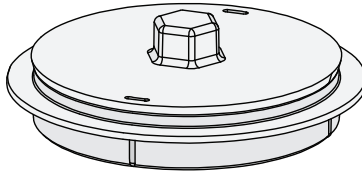
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7. Wait for the gunite to cure. Once cured, remove the 2 threaded plugs and the gunite shield from the housing assembly. Discard the gunite shield but save the plugs for pressure testing.



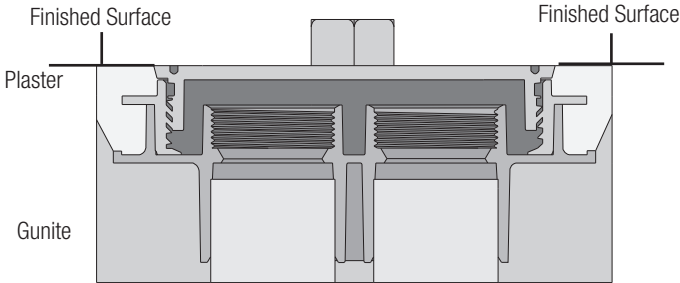
8. Remove the plaster ring and plaster shield from the box. These parts come assembled together as shown below. **DO NOT DISASSEMBLE.**

IMPORTANT: No O-ring is to be installed with the plaster shield; this is for winterization purposes only (See page 15 for winterization instructions).

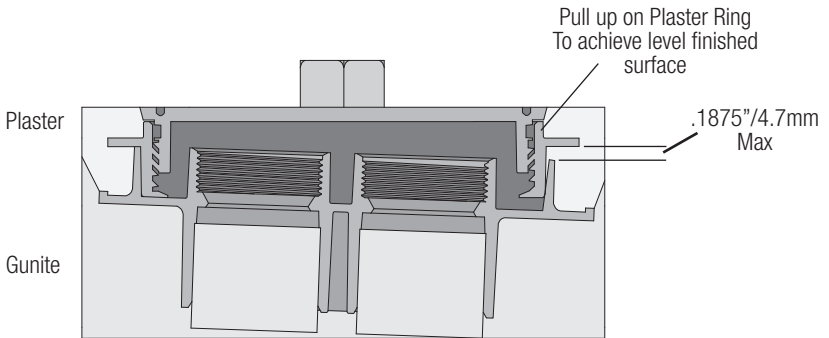




9. Install the plaster shield assembly onto the housing and verify that the surface of the plaster shield is level with the finished surface. If the housing was not installed level in step 4, use the plaster ring to achieve a level finished surface by pulling up on the edge of the plaster ring until level. See images below for reference.

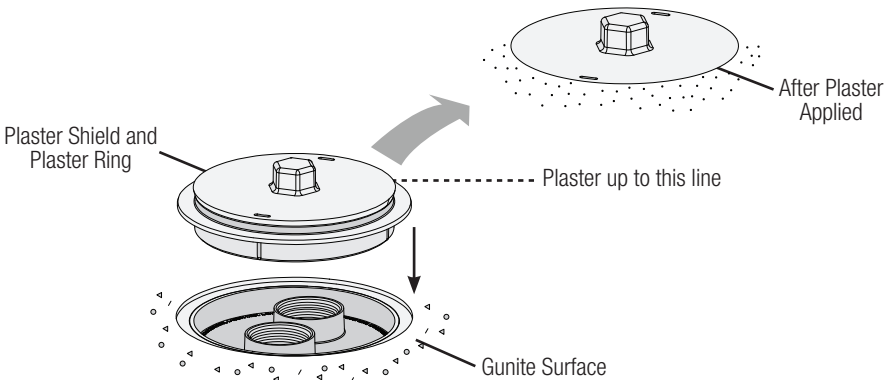


Flush Housing Installation



Example: Housing Installed at a 2° angle

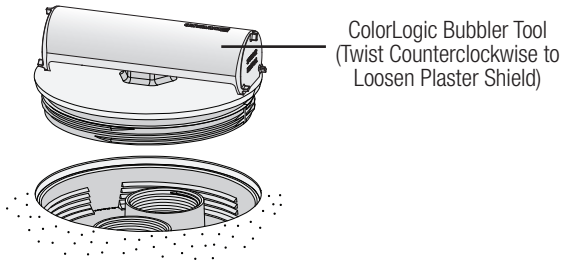
10. Apply and smooth out plaster around the edge of the plaster shield as seen below. The surface of the plaster should be even with the finished surface level.



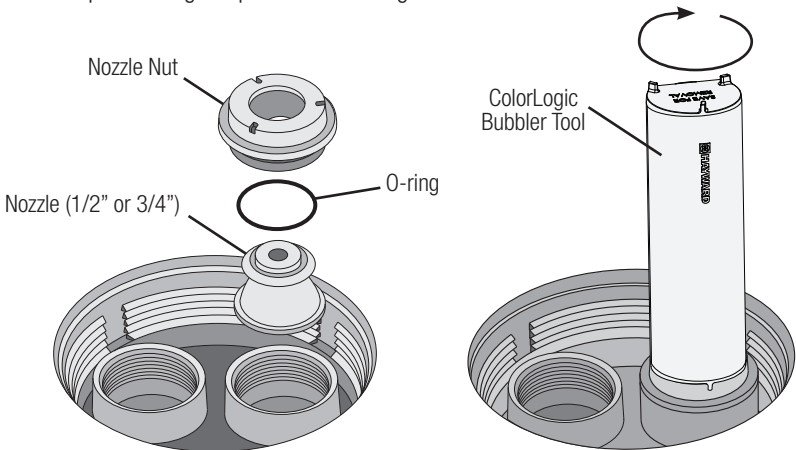


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11. Wait for the plaster to cure. Once cured, remove the plaster shield using the ColorLogic Bubbler Tool as shown below. Verify that the slots on the plaster shield are free of plaster and/or debris before inserting the tool. If you do not have the ColorLogic Bubbler Tool on hand, use a 1-1/4" wrench to remove the plaster shield. Note that the plaster shield may require an initial tap to loosen. Save the plaster shield for winterization, if needed (See page 15 for winterization instructions).



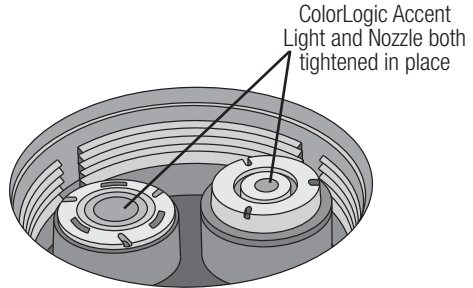
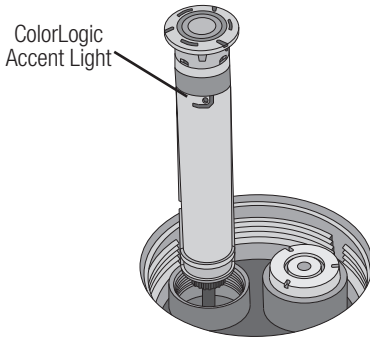
12. Flush the water line to remove any foreign material from construction that may be inside the system.
13. Remove the following parts from the box: Desired nozzle (1/2" or 3/4"), nozzle nut, and O-ring. Install the nozzle, nozzle nut, and O-ring for the desired effect in the water port and fasten it in place using the provided ColorLogic Bubbler tool as shown.



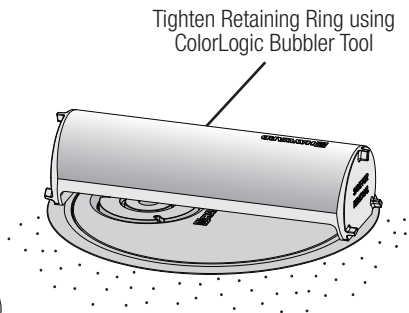
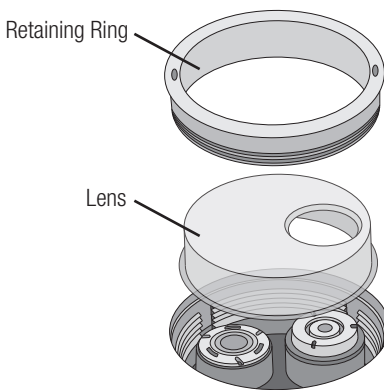


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14. If lighting will be used in the system, install the accent light into the lighting port by feeding the cord through the electrical conduit to the 12V input junction box. Use the tool provided with the Accent Light to install the light. Wire the light as instructed in the Accent Light owner's manual. See images below for reference.



15. If lighting will not be used in the system, remove the following parts from the box: ColorLogic Bubbler nozzle threaded plug and an O-ring. Install the plug with the O-ring into the lighting port. Tighten the plug using the provided ColorLogic Bubbler tool (in a similar fashion as seen in step 13).
16. Remove the following parts from the box: the lens and the retaining ring. Install the lens, making sure that the open hole is over the nozzle. Thread on the retaining ring using the provided ColorLogic Bubbler tool according to the diagram below. Installation is now complete.





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Operation

Plume Height Adjustment

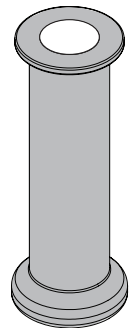
After the system has been started, you can adjust the water flow to get the desired effect. The following tables provide approximate values for water column height with combinations of GPM and depth of the ColorLogic® Bubbler. *NOTE: Water heights may vary.*

Plume height at given water depths (do not exceed 45gpm):

| 3/4" Nozzle Orifice | | | | | |
|---------------------|----|------|------|-----|------|
| Depth | 4" | 6" | 8" | 10" | 12" |
| 15gpm | 11 | 8 | 5 | 4.5 | 3.5 |
| 20gpm | 15 | 10 | 7 | 6 | 5 |
| 25gpm | 24 | 16 | 11 | 9 | 8 |
| 30gpm | 35 | 21 | 17 | 12 | 10.5 |
| 35gpm | 45 | 30 | 20.5 | 15 | 13 |
| 40gpm | -- | 37.5 | 27 | 20 | 15 |

| 1/2" Nozzle Orifice | | | | | |
|---------------------|----|----|------|-----|-----|
| Depth | 4" | 6" | 8" | 10" | 12" |
| 10gpm | 31 | 16 | -- | -- | -- |
| 15gpm | 48 | 26 | 15.5 | 12 | 10 |
| 20gpm | 75 | 43 | 25 | 19 | 15 |

NOTE: If the ColorLogic Bubbler creates an undesirable vortex or swirl, use the included Extender Nozzle. This rubber nozzle will extend when the Bubbler is turned on to redirect flow and avoid unwanted swirls. You can retract the Nozzle by pushing down on it.



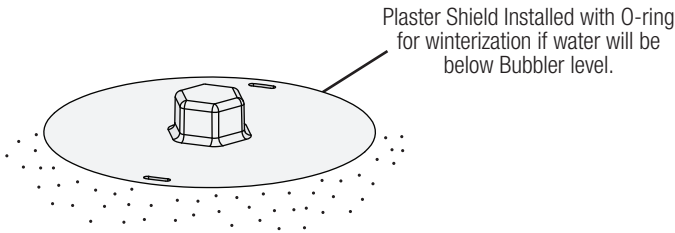


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Winterization

When the pool is to be prepared for winter or will be out of service for a long period of time, the following steps should be followed to ensure that the bubbler unit will not be damaged:

If water WILL be below bubbler level: remove retaining ring, lens, nozzle nut, and nozzle. Vacuum or soak up all residual pool water from niche. Install the plaster shield that was saved from installation along with the included O-ring. If these parts were not saved from installation, a replacement winterization kit is available (GLXBWNTRKIT) for order.



Spare Parts

| Number | Part # | Description |
|--------|-------------|------------------------------------|
| 1 | GLXBWNTRKIT | Winterization Kit |
| 2 | GLXBKTGR | Replacement Nozzle Kit - Gray |
| 3 | GLXBKTDG | Replacement Nozzle Kit - Dark Gray |
| 4 | GLXBKTWT | Replacement Nozzle Kit - White |
| 5 | GLXBLNGR | Replacement Lens Kit - Gray |
| 6 | GLXBLNDG | Replacement Lens Kit - Dark Gray |
| 7 | GLXBLNWT | Replacement Lens Kit - White |
| 8 | GLXBKTNOZ | Extender Nozzle |



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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. 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.



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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. Never operate or test the circulation system at more than 50 PSI. Do not purge the system with compressed air. Purging the system with compressed air can cause components to explode, with risk of severe injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.



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. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

WARNING – Risk of Electric Shock: Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard. Electrical ground all electrical equipment before connecting to electrical power supply.

WARNING – Risk of Electric Shock: 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 mm²) [No. 6 AWG (13.3 mm²) 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: 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 – HAYWARD® pumps are 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



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Hayward® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products, Inc. warrants its Universal ColorLogic® and CrystaLogic™ pool and spa lights, niches, pool light transformers, and couplers 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.hayward.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.

For further information or consumer
technical support, visit our website at
www.hayward.com



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