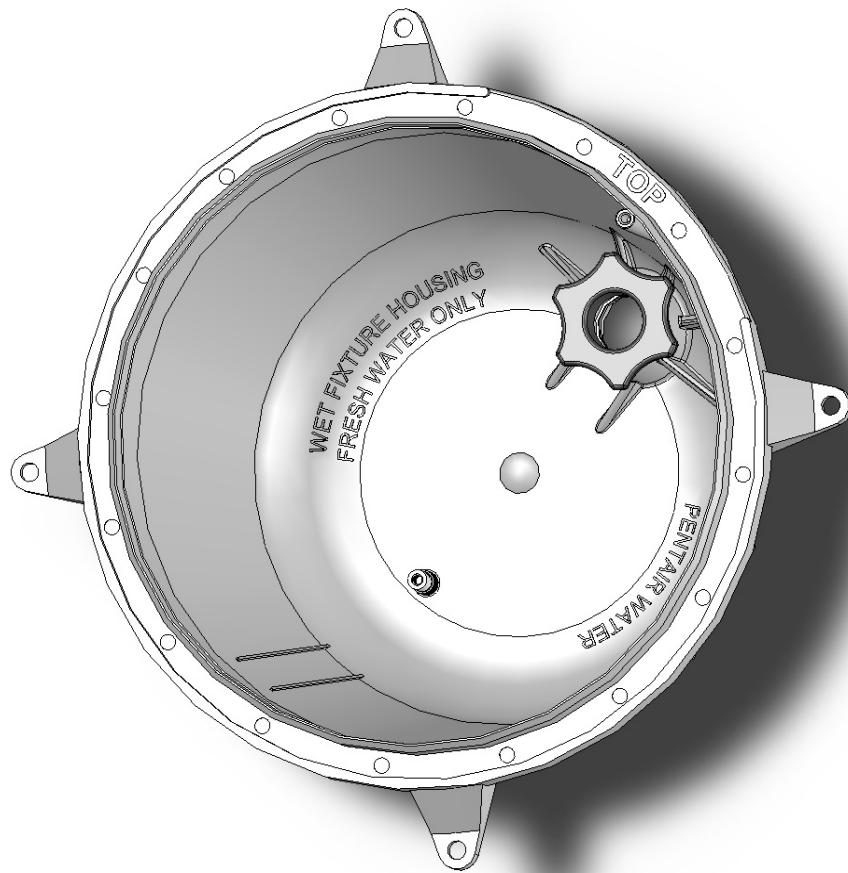


Large Plastic Niche

(For use with Pentair wet niche light fixtures)



Installation Guide

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

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IMPORTANT SAFETY PRECAUTIONS



Important Notice:

Attention Installer: This manual contains important information about the installation and safe use of this product. This information is provided for the person installing this product.

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



WARNING — Risk of electrical shock or electrocution



This niche - fixture housing 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, installers or others due to electrical shock, and may also cause damage to property. Read and follow all instructions in this manual.

Important note about general installation

All work must be performed by a licensed electrician, and must conform to all national, state, and local codes.

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Large Plastic Niche Kit Contents

The following items are included in the Large Plastic Niche kit. If any items are missing please contact Pentair Technical Support.

- Plastic niche (large) (P/N 79206700)
- Cap, seal (P/N 670040)
- Seal assembly (P/N 670039)
- PVC conduit, elbow (P/N 520272)
- Large Plastic Niche Installation Guide (this manual)

Pentair compatible light fixture part numbers

Use the large plastic niche with any of the following Pentair wet niche light fixture part numbers:

P/N 783xxxxx
P/N 784xxxxx
P/N 788xxx xx
P/N 789xxxxx
P/N 6000xx

Technical Support

Contact Technical Support at:

Sanford, North Carolina (8 A.M. to 5 P.M.)

Phone: (800) 831-7133

Fax: (919) 566-8920

Moorpark, California (8 A.M. to 5 P.M.)

Phone: (800) 831-7133 (Ext. 6502)

Fax: (805) 530-0194

Phone: (800) 831-7133 (Ext. 6502)

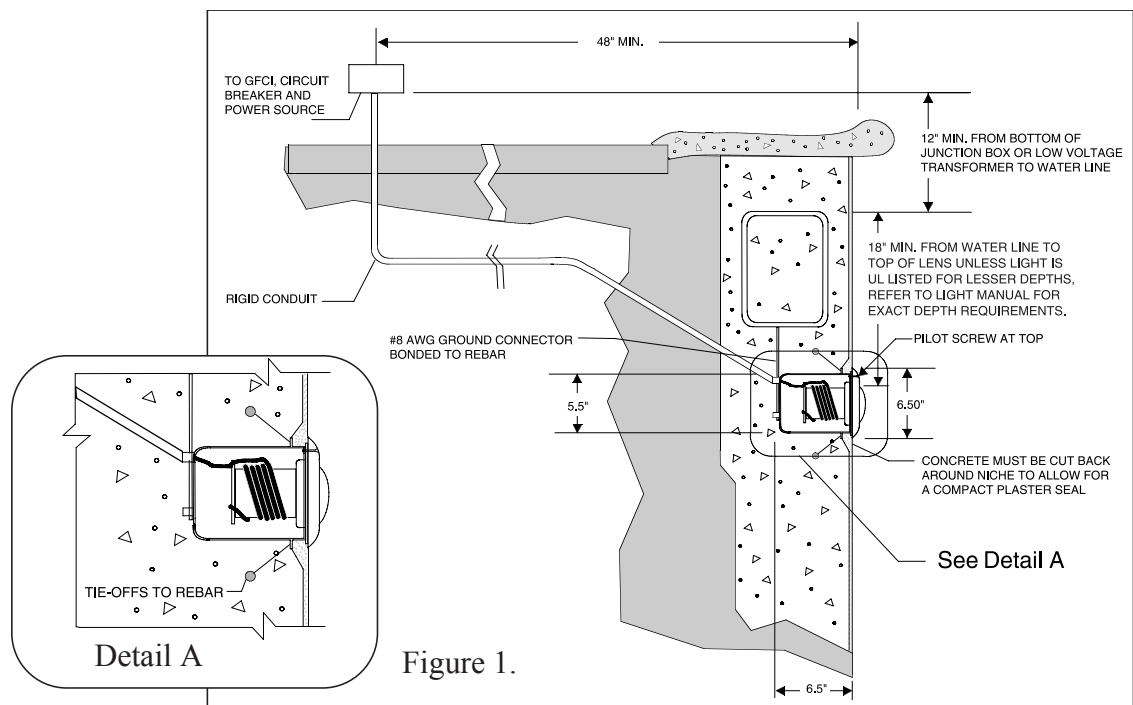
Fax: (805) 530-0194

Web site: visit www.pentairpool.com

Large Plastic Niche Overview

READ THIS FIRST BEFORE INSTALLING

1. Ensure that the electrical system of your pool conforms with the following requirements of the National Electrical Code (NEC), and all local codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements before the Large Plastic Niche (fixture-housing) is installed.
2. Some of the NEC requirements are as follows:
 - The lighting circuit must have a Ground Fault Circuit Interrupter (GFCI), and have an appropriately rated circuit breaker.
 - The junction box or the low voltage transformer is located at least 12 inches above water level and at least 48 inches from the edge of the pool, see Figure 1 below.
 - The light fixture and all metal items within five (5) feet of the pool must be properly electrically bonded.
 - The 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. This requirement may be less than 18" if the fixture is installed in an area of the swimming pool that is not used for swimming and the lens is adequately guarded to keep any person from coming in contact with the lens. Consult your local codes and ordinances and the National Electrical Code (NEC).



The niche is properly electrically bonded and grounded using the NO. 8 AWG ground connector located at the rear of the niche, see Figure 1.

Use only Pentair lighting fixtures in this niche to ensure proper bonding and grounding connections.

Large Plastic Niche Concrete/Gunite Pool Installation

The following steps describe how to install the large plastic niche to the pool rebars, connect the metal conduit to the niche and connect the bonding/grounding wire to the outside of the niche.

DANGER RISK OF ELECTRICAL SHOCK OR ELECTROCUTION

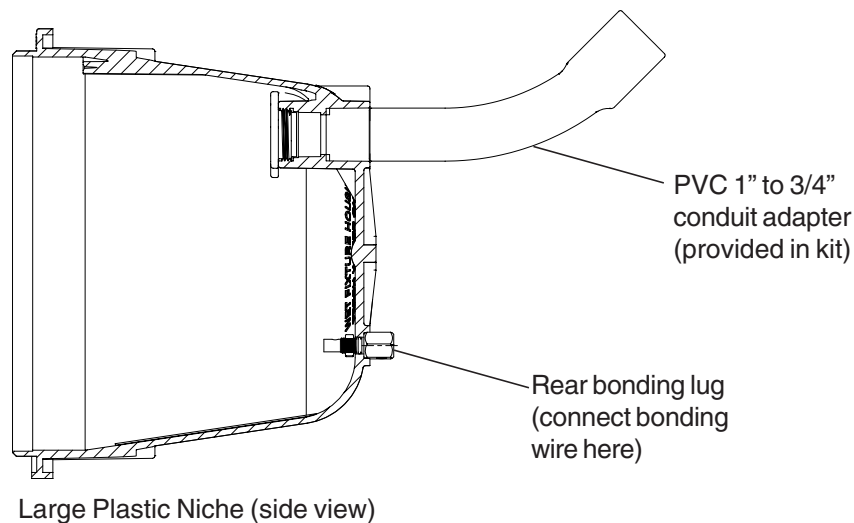
WARNING — Risk of electrical shock or electrocution.



For proper bonding and grounding connections, use only Pentair Underwater Light fixtures with this niche-fixture housing. Failure to do so could create an electrical hazard which would result in death or serious injury to pool users, installers and others.

1. Locate position on the vertical surface where the niche and light is to be installed. The top of the light lens must be a minimum of 18" below normal water level.
2. Connect the PVC conduit to the niche using a PVC solvent, such as Weld On 710.
Note: If required, a 45° PVC 1" to 3/4" conduit elbow adapter is provided with the kit. When gluing the PVC elbow to the niche, ensure to insert the elbow with the niche facing up, to avoid glue running into the inside of the niche.
3. Secure the niche-fixture housing to the rebar with tie wires. Orient the niche so that the pilot screw receptacle is located at the top of the niche.
4. Connect the bonding wire from rebar and bonding grid to the bonding lug at the rear of the niche.
5. Bond the niche-fixture housing to all other metallic items within 5 feet of the pool, using a No. 8 AWG bond wire. The Bond connection is located at the rear of the niche.

Note: If using non-metallic conduit (PVC), a No.8 AWG bonding/grounding wire must be installed through the conduit from the junction box to the bonding/grounding lug inside the niche. The connection inside the niche must be sealed with a listed sealant such as 3M Scotchcast 2135, (see page 5, step13).



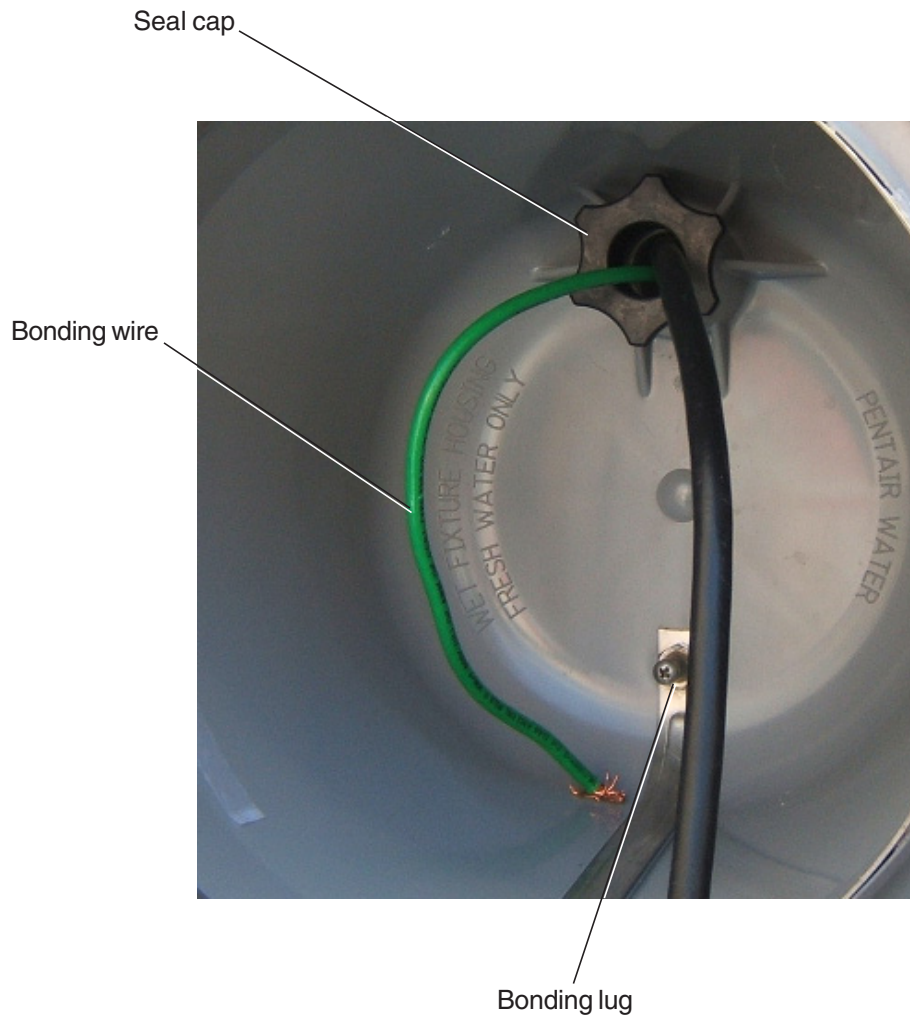
6. Support conduit to hold the Large Plastic Niche at the proper distance in front of rebar so that the front of mounting ring is flush with the desired finish surface.
7. If pool surface is to be plastered, you must allow proper concrete cut-back for plaster thickness. Finished concrete surface must be cut-back behind the niche flange, see Detail A of Figure 1 on

Installing the seal in the large plastic niche

Before installing, read through the following steps. The following describes how to attach the seal to the bonding/grounding wire and light cord and to install the water tight seal inside the niche.

To install the seal in the niche:

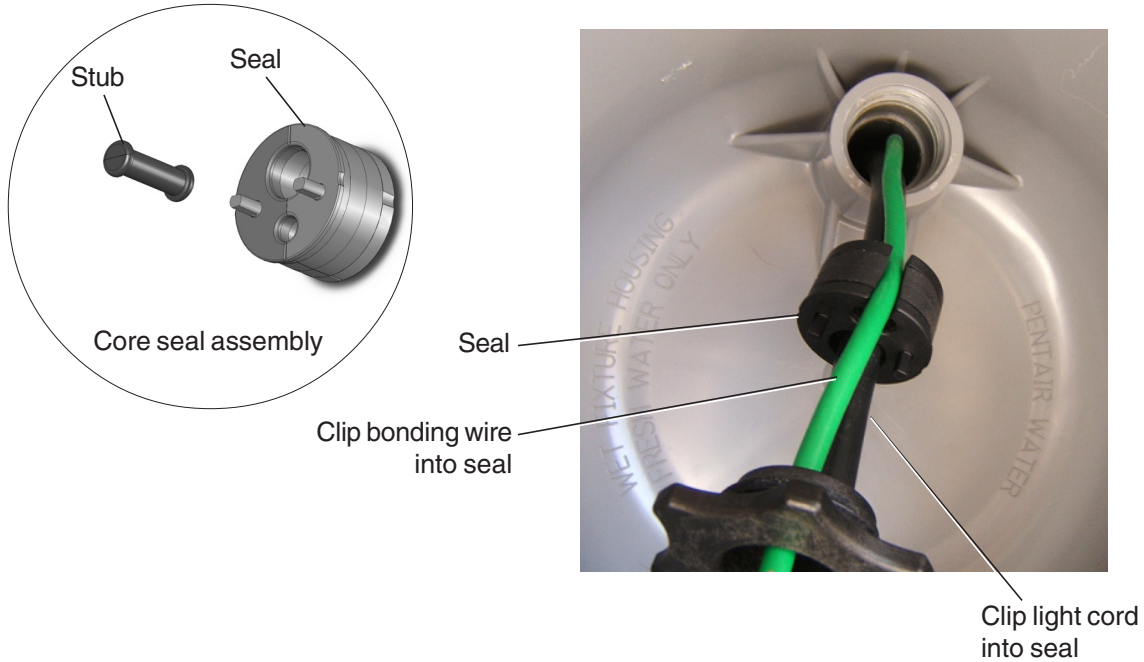
1. Leave the seal cap in the niche as installed at the factory.
2. Route the bonding/ground wire and the light cord through the conduit and seal cap into the inside of the niche as shown below.
3. Pull the required length of light cord through the niche.
4. Pull the bonding/ground wire through with enough slack to connect to the niche bonding lug.



5. Remove the plastic bag containing the cord seal assembly (seal and stub) from the inside of the niche. Remove the seal and stub from the bag.

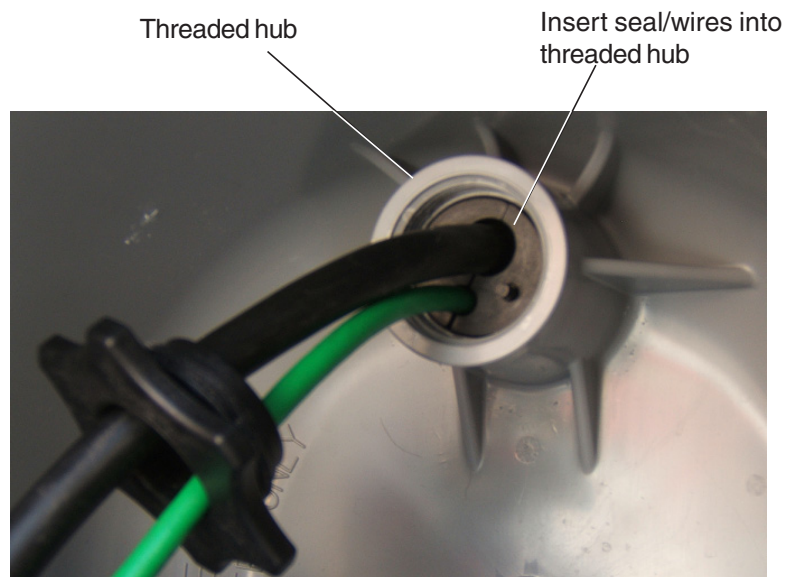
6. Grasp the seal and spread the smaller opening, and clip onto the bonding/ground wire. Spread the larger opening, and clip onto the light cord as shown. Orient the seal pins facing outward.

Note: If a bonding/ground wire is not being used, insert the stub in small opening where the bonding/ground wire would be.

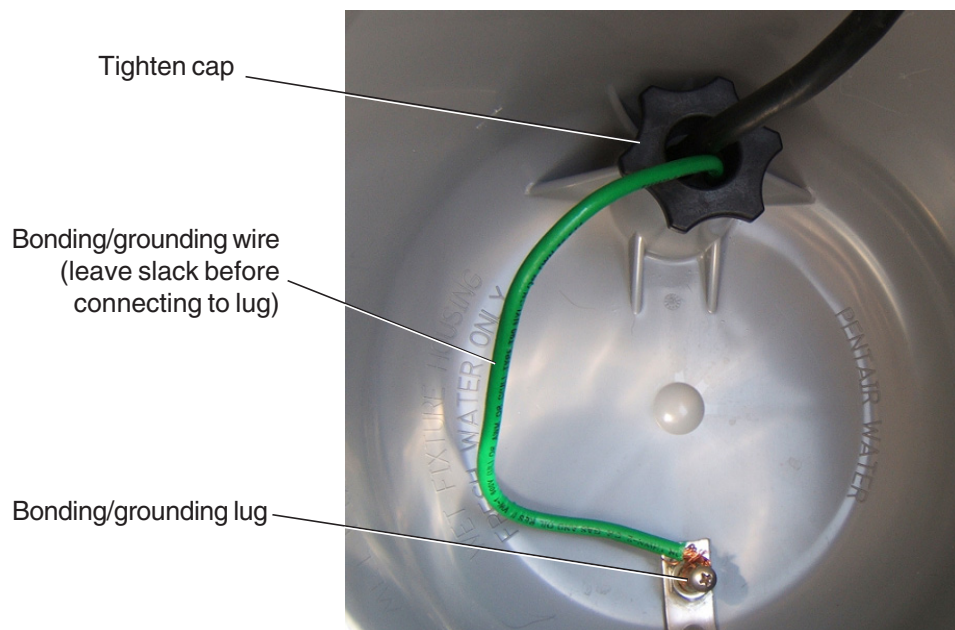


7. Ensure that the seating surface in the threaded hub is clean and clear of any debris or glue.

8. Slide the seal down the wires and insert it into the threaded hub in the niche. Push the seal and wires into the hub until it bottoms out.



9. Slide the seal cap into the niche threaded hub. Carefully position and align the cap with the threaded hub. Hand tighten the cap clockwise two or three turns.
10. Gently tug on the wire, you still should be able to pull the wires in or out of the seal to adjust the wire length if necessary.
11. Tighten the cap clockwise to lock the seal and wires in place. Tug on the wires to ensure that they do not move. The seal will form a water tight seal so that water cannot enter the conduit from inside of the niche.
12. Connect the bonding/ground wire to the lug inside the niche. Tighten the screw to secure the wire to the lug. Ensure that the wire has sufficient slack to allow removal of the cap and seal in the future.
13. Sealed the wire/lug connection with a listed sealant such as 3M Scotchcast 2135.



14. The niche installation is complete. The niche is ready for the light installation.

Seal Removal and Replacement

It may be necessary to remove and replace a light assembly which requires removal of the seal and cap to allow running a new light cord to the junction box. After the existing seal is removed, a new seal should be installed.

WARNING — Risk of electrical shock or electrocution.



For proper bonding and grounding connections, use only Pentair Underwater Light Fixtures with this niche-fixture housing. Failure to do so could create an electrical hazard which would result in death or serious injury to pool users, installers and others.

To remove and replace the seal (refer to illustrations on previous pages):

1. Remove the light assembly from the niche and cut the wire that is connected to the existing light.
2. Unscrew the cap from the niche hub.
3. Tug on the light cord to loosen the seal from the niche threaded hub. Using needle-nose pliers, gently pull on each of the seal pins to remove the seal and wires from the hub.
4. Unsnap the seal from the wires and remove the seal from the niche. Leave the bonding/ground wire connected to the lug inside the niche.
5. Insert the light cord through the cap.
6. Run the new light cord into the niche hub and through the conduit to the junction box.
7. Allow for the required length of light cord to wrap around the light assembly.
8. Spread the larger opening of the seal, and clip it onto the light cord. Spread the smaller opening, and clip it onto the bonding/ground wire.
9. Ensure that the seating surface in the threaded hub is clean and clear of any debris or glue.
10. Slide the seal down the wires and insert it into the niche hub. Push the seal and wires into the hub until it bottoms out.
11. Slide the seal cap into the niche threaded hub. Carefully position and align the cap with the threaded hub. Hand tighten the cap clockwise two or three turns.
12. Gently tug on the wire, you still should be able to pull the wires in or out of the seal to adjust the wire length if necessary.
13. Tighten the cap clockwise to lock the seal and wires in place. Tug on the wires to ensure that they do not move. The seal will form a water tight seal so that water cannot enter the conduit from inside of the niche.
14. The installation is complete.

