hydrosphere SERIES

Semi-Inground Pool by Doughboy

Semi-Inground Installation Guide

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Base Kit Components

52" Walls
Buttress Braces
Double-F Track (Liner Track) with Tek Screws
Bolt Pack
Rebar
Safety Signage

Add-On Components

6' Step Kit (optional)

6' Fiberglass Step
52" Walls to position step (if applicable)
Safety Handrail
Concrete Deck Anchors & Wood Deck Anchors (for handrail)
Escutcheons (used when installing handrail on concrete deck)
PVC Step Supports

Skimmer Kit

Doughboy Classic Deluxe Skimmer with Return
Doughboy Classic Deluxe Hard Plumb Kit

Filtration System (optional)

Doughboy Silen S or Silen Plus Pump
Ranger 25" Sand Filter

Plumbing Kit

1.5" Schedule 40 Flex PVC - 100' Roll
Adapter Fittings for Ranger Filter

Pool Liner

Ladder Kit (optional)

Deck Mount Ladder
Concrete Deck Anchors OR Wood Deck Anchors
Escutcheons (included with concrete deck ladder kit)

Light Kit (optional)

Spa Electrics ATOM Series LED Light with Niche & 100' Cord
12V Transformer

Top Rail Kit (optional)

Standard or Deck Mount Top Rail (Per Order)
Tek Screws

Insulation Kit (optional)

R-10 Insulation Foam - QTY Per Pool
Spray Adhesive

The Installation Materials List below represent tools or materials that may not be commonly used for other pool installations. A link has been provided for the purpose of verifying the item needed as well as provides opportunity to purchase online if necessary.

MATERIALS LIST		
Item	**Quantity**	**Suggested Supplier**
3# or mini-sledgehammer	1	Lowe's
Miter saw	1	Lowe's
(2) 5/8" or (2) 3/4" hole saw	1	Home Depot
Crowbar	1	Lowe's
4' Level	1	Lowe's
5/16" Starter Punch	2	Lowe's
Locking c-clamps	4	Lowe's
9/16" wrench	2	Lowe's
1/4' socket driver	2	Lowe's
5/15" impact nut driver	2	Lowe's
9/16" wrench	2	Lowe's
7/16" drill bit	2	Lowe's
Cordless drill and impact driver bundle	1	Lowe's
Laser level, transit, and story pole	1	Lowe's
Patio blocks (8x15, 2")	Dependent	Menards
Super glue	2	Lowe's
Duct tape (2'x60 yds)	2	Lowe's
Marking paint	2	Lowe's
100' measuring tape	1	Lowe's
Marking string	1	Lowe's
Wood stakes and rebar		

Installation Schedule

Example schedule for a typical installation:

Day 1 - Excavation

- 8:00am - 11:30am
  - Remove all earth within the marked area to ensure the finished dig is at, or slightly greater than, the dimensions marked. This ensures an easy set of the braces and walls.
  - Once cleared, stakeout with string and rebar the excavated area dimensions. This will give you a clear visual if the exterior walls are straight and if you have any additional hand digging to clean the area.
- 11:00am
  - Conduct inventory of pallets. Remove plastic and do a physical inventory to ensure all items are present.
  - Layout wall panels, braces, v-stakes, and rebar around the exterior of the excavated area. Be sure and locate the skimmer wall panel and place it in the designated area noted by the homeowner.
- 12:30pm
  - Lunch
- 1:00pm - 3:00pm
  - Rake out the center of large clumps. Remove any tree roots in the excavated area. Use a compactor or hand tamper as needed to give a level base. You may use some sand at this point to aid in achieving the smooth bottom.
  - Save time on day 2 of install by placing sand in the center of the (now level) excavated area. Ensure to keep sand in the center of the pool area, away from where walls will be placed.
  - Complete step installation and wall height set. Find the center on the step side and mark the string with where the step will be placed. The string will help to ensure the face is set correctly and quickly.
- 4:00PM - 5:00PM
  - Straight walls-level and plumb using Buttress Brace. All v-stake cutouts have v-stake inserted and at least one rebar piece per wall section on straight walls.

Installation Schedule (...continued)

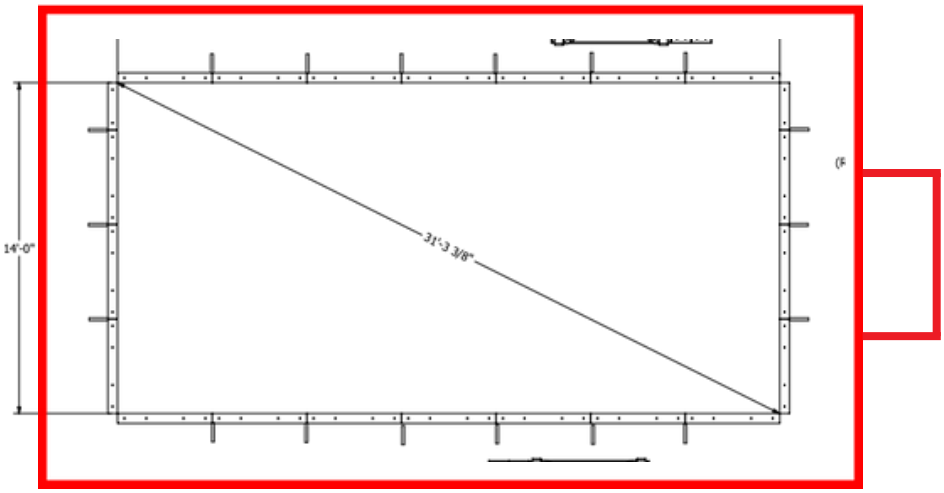
Day 2 - Pool Assembly

- 8:00am
  - Two people: Top rail and Double F-Track installation.
  - One person: Pre-liner install tasks: step preparation and light.
- 10:00am
  - Concrete delivered.
- 11:00am
  - Sand distributed to a 2” depth and verified against base of wall and level.
  - Begin backfilling.
- 12:00pm
  - Lunch
- 12:30pm
  - Liner installation: add step cover template and vacuum once liner is positioned.
- 1:30pm
  - Water fill: monitor that step cut out is completed just before water gets to the first step.
  - Continue backfill
- 2:30pm
  - Two people: Skimmer & return installation, post-liner installation cut out on step, light, skimmer and return.
  - One person: Setup of filtration system with measuring, cutting, and gluing of PVC fittings.
- 4:00PM
  - Ensure top rail safety stickers are applied and clips are installed.
  - Continue backfill and site cleanup.
- 5:00PM
  - Job site final cleanup. Remove trash, plastic and pallets.

Excavation

1. Create a 2’ over dig around the entire pool. This will give you room to work efficiently and install the bracing with ease. This also serves as your concrete barrier wall as the concrete collar will be poured 10” deep and 2’ wide. In the example below, a 14 x 28 rectangle pool would be excavated to the red lines delivering a 18’ x 32’ area. If fiberglass steps were added, you would add an 8’ x 4’ section in the designated area.

Ex. A 14' x 28' Rectangle Pool would be excavated to the red lines delivering an 18' x 32' excavated area.



2. Excavate to a minimum 18” depth. A 24” depth is most common and recommended for Semi-Inground pools.

3. A 2” layer of masonry sand is required as a base for the pool floor.

4. Use the transit level to identify the high and low spots in your excavation.

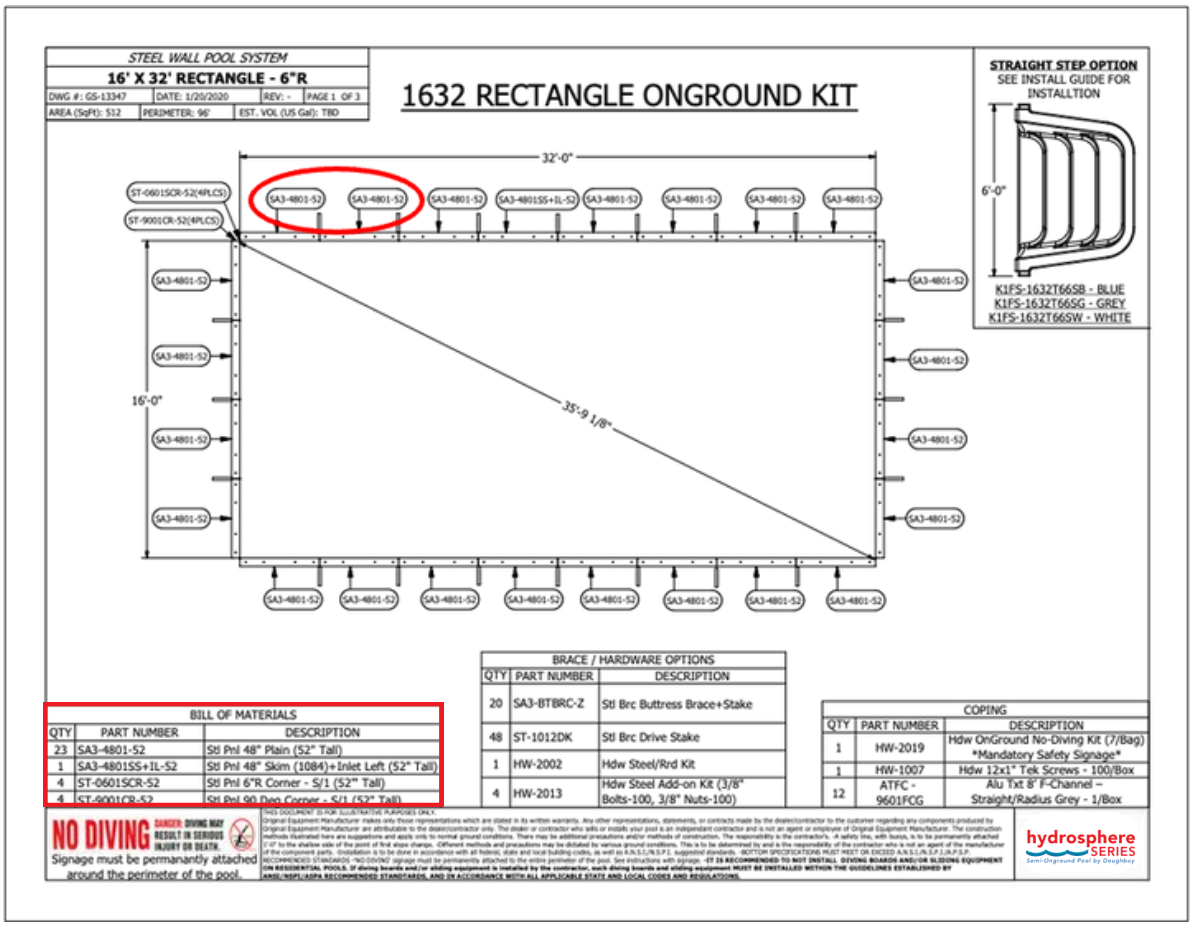
5. In the unlikely event of a high water table, it may be necessary to install a submersible sump pump next to the excavated area to pump water away from the pool area. This process must be completed before moving on to wall installation.

Excavation (...continued)

Before beginning the step and wall installation, identify where each steel panel goes from the build diagram. The sticker on the edge seam of each panel has the item description to aid in identifying. The image below has a heading **SA3-4801-52** and a description of **Stl Pnl 48" Plain (52" Tall)**. Lay out the steel panels based on the corresponding pool diagram.

*****you will have to identify where to put the skimmer and return panel and substitute wall panels if fiberglass steps were chosen. If installing a 6' Step Kit, you may have extra panels depending on your pool shape, size, and step location*****

The SA3 product code will be illustrated on the pool drawing for placement, as well as in the Bill of Materials at the bottom left of the drawing.
The only variable you may have in the drawing is the skimmer and return inlet panel, and pool steps.



6' Step Installation (Part 1)

Pre-liner installation

If the 6' Fiberglass Steps were purchased, a safety handrail, anchors, and escutcheons are delivered with the steps.

Step notes:

- Steps come with 4 pieces of PVC with escutcheons attached for the legs.
- The step area should be excavated as well and will have concrete coverage.
- Dig a trench 6 ½" deep x 10" wide and 6'6" long with a pickaxe or shovel. Be sure that the center of the step aligns with your string layout for your pool. Place the front edge of the step into the trench. You can verify the depth by ensuring that there is 51" to the top of the cantilever step. (see step image below left, 51")
- Steps should be level across the back. Use a level to ensure. From front to back of the step, you should have a ¼ " per foot pitch grade to the outside of the pool for drainage and step safety. The steps are approximately 4 feet in depth from front to back edge, which equates to a 1" fall at the back of the step. Verify this with a level and measuring tape. To achieve the correct pitch, cut the PVC legs with the attached escutcheons as needed and attach them securely to the underside of the step assembly. Use patio blocks and shim as needed.
- Once steps are level and the pitch is accurate, drive rebar through the escutcheons at the base of the PVC tubes. This will keep the step in place when concrete is added later.
- Secure the front edge of the step on both sides with rebar to prevent the step from moving from weight of the concrete. Remove the rebar in front of step once concrete has set.
- Set wall panels adjacent to the steps using C-clamps. Start by aligning the top of the wall 1" higher than the outside edge of the step. You can also check for proper height by using a piece of coping to ensure it aligns with top of finished step. (see the picture below right)

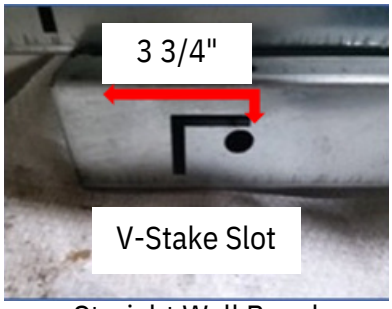
Top rail aligns with top of step and aids setting the wall height correctly

6' Step Installation (Part 1) (...continued)

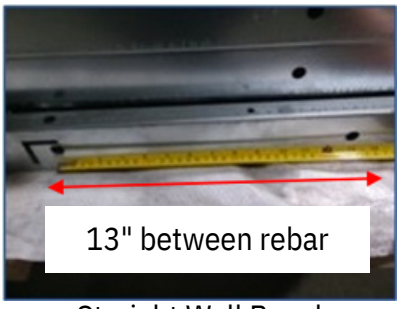
- Make sure the panel is flush with the step face from top to bottom. C-clamp the wall section in three spots to ensure a strong hold during the drilling of the step.
- Check that the three clamps are not covering any of the outside holes on the panel.
- The step will not have holes on the flanges. Use a 7/16” drill bit to drill the outside holes of the panel through the step. Avoid making contact with the fiberglass portion of the step with the drill bit.
- Insert bolts through all of the holes with the threads facing away from the step and tighten the nuts using a deep 9/16” bit and impact driver to secure the nuts and bolts.

Wall Assembly

- After the step and first wall panel have been secured and wall height confirmed, set the first concrete patio block at 4” inside the outer edge of the next wall panel. This is to avoid covering up the rebar and V-stake cutouts in the bottom of the wall panel. Center the block on the seam of radius walls.



Straight Wall Panel



Straight Wall Panel

Radius Wall Panels

Note: Radius wall panels should have a patio block positioned on center of the two radius panels (see illustration above right).

- Each wall panel should have a patio block positioned between the V-stake and the rebar on each panel all the way around the pool. Do not use treated wood. The V-stake slot extends to 3 3/4" from either edge of the straight wall panels. (see images above) Place a patio block in the 13" space between the rebar punchouts. Once you have set the first straight wall block, you can measure 4' to the next point where a block should be placed. Follow a string line to place blocks accurately. should be recessed into the prepared ground so that they are flush with the surface. The blocks must be level in all directions. All blocks must be flush with the ground and level with each other all the way around the perimeter of the pool.

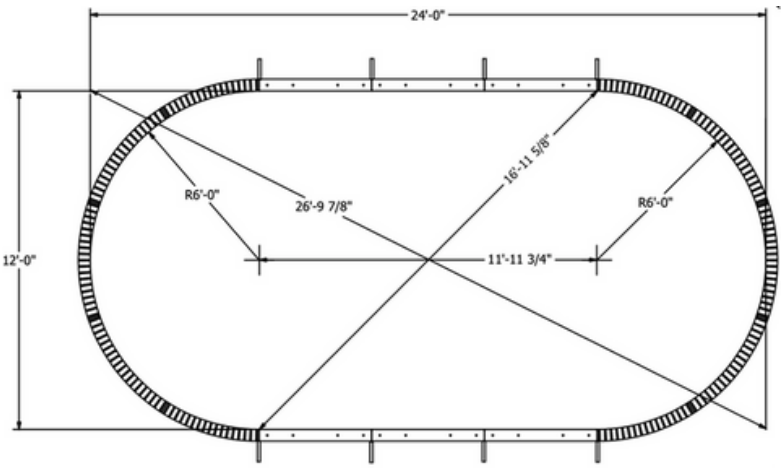
Wall Assembly (...continued)

Set wall panels, corner pieces and buttress braces around the edge of the excavated area. Doing this process once eliminates getting in and out of the excavated area frequently and allows you to plan the step and skimmer locations.
With blocks in place, wall assembly may proceed.

- Continue to assemble the walls following the build diagram. This is typically a two-person job:
  a. One person places the panels in place and aids in ensuring the pool interior faces of each panel are flush with each other.
  b. Use a 5/16” Starter punch in the second hole from the top to align the pre-drilled holes in the wall. This also aids in ensuring the faces of the walls are flush. Only insert bolts in the top and bottom holes of each panel at this time. You will attach a brace to each straight wall section afterward. **Buttress braces WILL cover some of the pre-drilled holes.**
  Tip: It is a good practice to use a transit level to ensure the patio blocks are level to keep the wall height consistent as you install the wall sections.

- You will adjust wall positioning routinely when assembling the Grecian and Oval pools. These two pool styles have dimensions on the build diagram that are used to ensure the assembly's accuracy and the pool walls' position.

  a. Use a crowbar if needed to lift and move the connected walls to achieve the appropriate dimensions.
  b. ***Dimensions at this time should be taken only from the bottom edge of the pool walls.*** Since the walls have not been plumbed, measurements would be inaccurate if taken from the top of the panel. Refer to your pool diagram for measurements. (see illustration)



  c. Once the measurements taken correspond with your pool diagram, use (2) V-stakes per straight wall section and secure the position of each wall.

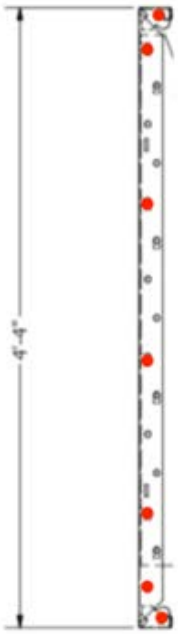
Wall Assembly (...continued)

d. The V-stakes should be driven to approximately 10” in height out of the ground as they are to be just above the concrete surface once the concrete footer is poured.

e. Use at least one piece of rebar in straight-wall panels and all the holes in radius walls.

f. Straight wall sections need to be truly straight. One way to ensure this is to use a string connected at the corner of the pool or the end of the radius sections. Then draw the string tight to the opposite corner or the beginning of the next radius

g. When bolting together straight wall sections, only use the inside edge holes (illustrated on the right in red) until the buttress brace has been attached. Once the brace has been attached, secure all holes with nuts and bolts and tighten.

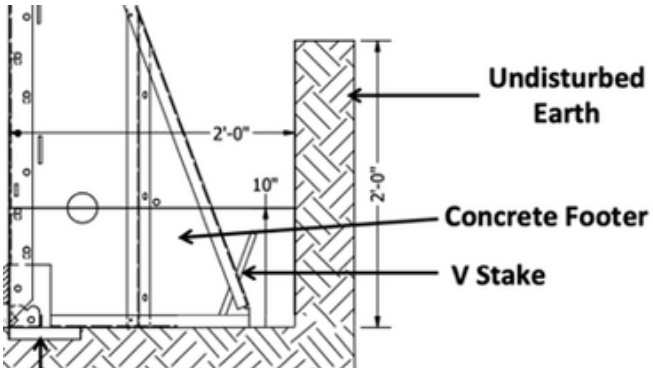


- With patio blocks in place, wall assembly can be completed in a few more hours. Images below show wall panel assembly on a 14' x 28' Rectangle Pool.

Brace Assembly/Pool Leveling

1. Each Brace will attach to the walls using the outer holes of the wall flange. Brace locations are marked on your pool drawing. The brace part number is SA3-BTBRC-Z.
2. **Each buttress brace comes with a stake that allows you to secure the wall section once plumb.**
3. **LEVELING THE WALLS:** If necessary, raise adjoining wall sections using shims to ensure the pool wall sections are as level as possible. Use shims on the patio blocks to raise the wall sections as needed. **Do not use pressure treated wood shims.**
4. After the base of the walls have been staked and you are satisfied with the dimensions (per your pool diagram), plumb the walls using a short level on the wall section.
5. **PLUMBING THE WALLS:** Use shims under the buttress brace to achieve plumb, and then tighten the bolt and nut in the V-stake to hold. **Do not use pressure treated wood shims.**

Concrete Collar



When ordering concrete, ask for: Ready Mix Concrete, Footer Mix, 3000 psi, 3-inch Slump, no additives.

Each buttress brace has a hole in the panel that serves as a benchmark for depth. (see illustration top left) The center of the hole is 10”. Use a rake or shovel, and work the concrete into the corners of the walls and the buttress braces.

Add concrete under the step first. Work the concrete fully underneath the step. Utilize the back of a rake to work the concrete into all crevices. Concrete should come up to the base of the first step, and the base of all 4 PVC posts and escutcheons covered.

The concrete footer must be 8” - 10" deep.

Double check that the walls are still plumb once concrete has been poured and adjust if necessary.

Insulation Kit Installation

The insulation kit is shipped in 23” x 51” sections. (image right) These panels are approximately the height of the wall panel.

Sections will need to be cut down to the appropriate width and height to fit within the backside of each panel on the pool. Each panel is intended to fit between the rib on the panel and the vertical flange. **The insulation must be AFTER pouring the concrete footer to ensure the concrete covers the bottom flange of the wall and goes up the wall.**

To install, cut the panel (if necessary) to the width needed. Spray adhesive on the wall panel to adhere the insulation to the steel pool walls.

You will receive two cans of adhesive spray in the Insulation Kit. (image right)

When installing around skimmers and returns as shown in the image below, measure the position of the return inlet and cut the insulation panel to allow access for the filtration system to be completed

DO NOT mount the skimmer prior to cutting and installing the insulation panel. This will give you the cleanest look and ease of installation.

Mark the skimmer opening by placing the insulation panel against the wall with the skimmer cutout in the steel. Use the skimmer face plate then to outline the amount of material to be removed to allow the skimmer to be installed.

Pool Light Installation (Part 1)

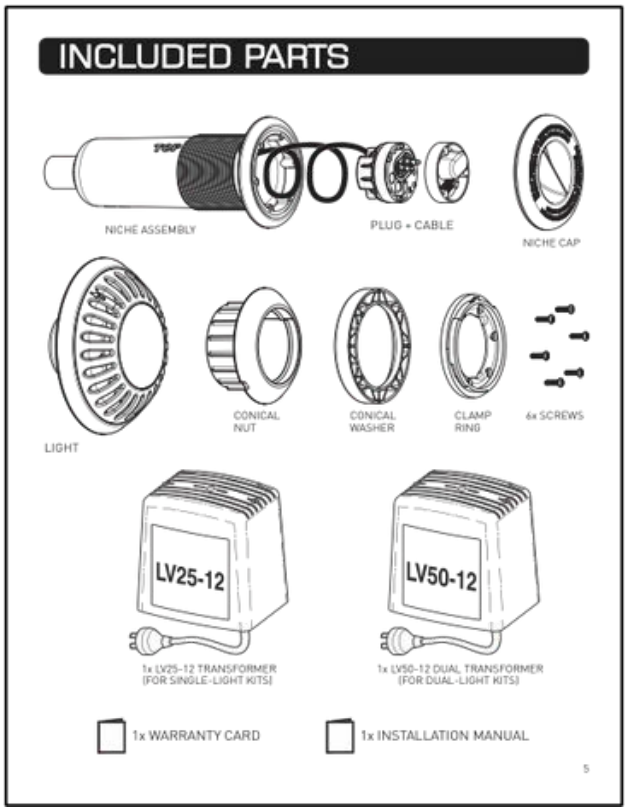
Pre-liner installation

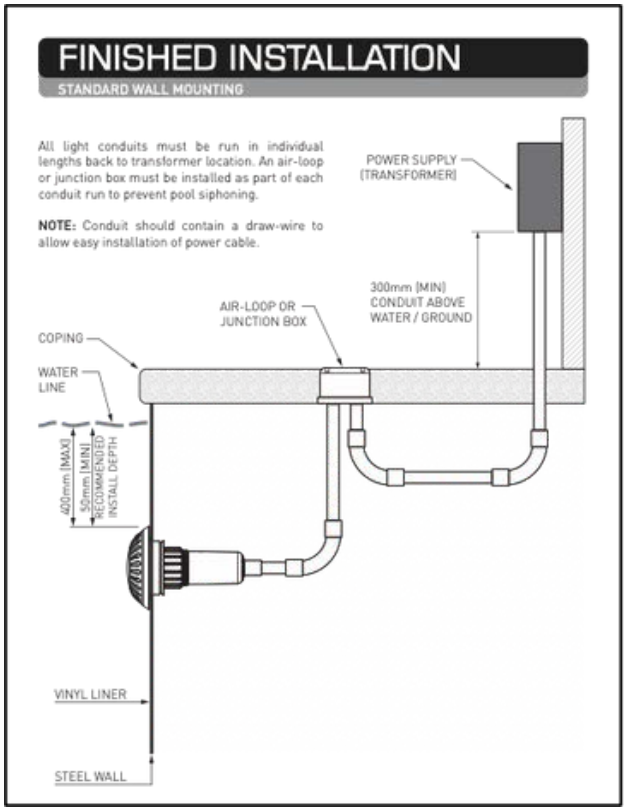
1. Look at the backside of the straight wall that the light is to be installed on. Note whether there is a rib centered on the wall. Do not drill where a rib is present. Measure over to the left or right 3 ½" to ensure that you are far enough away from the rib on the back of the wall panel.
2. Measure down from the top edge of the pool approximately 16" to mark the spot for the hole to be made.

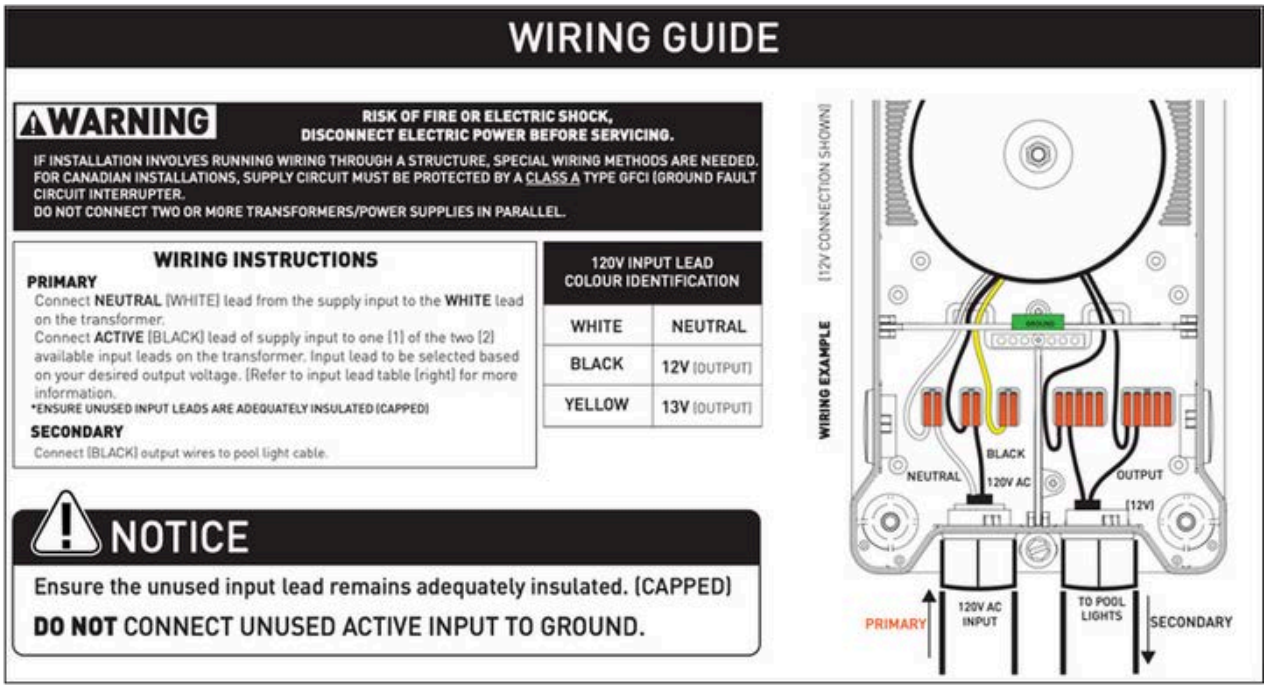
Tip: Drill the hole from the inside of the pool using either a 2 ¾" or 2 5/8" hole saw. Use a drill that has ample torque to complete the drilling of the hole. Be sure to hold the drill firmly with both hands as the hole saw may grab and cause injury.

3. With the niche and attached power cord inside the pool, pass the power cord through the hole from inside the pool. As you do, locate the conical nut and conical washer.
4. From the outside of the pool, pass the electric cord through the washer with the flat side of the washer against the pool wall. Then pass the cord through the nut with the curved face of the nut facing the pool wall.
5. Once the power cord is completely passed through the hole, you will insert the end of the niche assembly through the hole, and through the conical nut and washer. Ensure that the side marked "TOP" is facing upward on the niche.
6. Hold this in place and use the conical nut to tighten it in place.
7. Remove the red niche "CAP" before vinyl liner installation.

Pool Light Installation (Part 1) (...continued)







ALL electrical work must be completed by a qualified, licensed electrician.

Top Rail Installation

Whether using the standard top rail or the deck mount top rail, the top rail will come in 4' sections. It will be installed on the top flange of the pool walls. This will conceal the top of the pool wall all the way around the pool.

The top rail is secured to the top of the panels using self-tapping screws #3 (tek screws) approximately every 12" – 18" around the pool (see image above).

1. The top rail is mounted by drilling the tek screws through the bottom of the top wall flange into the bottom of the top rail, as shown in the image above. Keep the top rail firmly in place while you enter the tek screws.
2. When installing deck mount top rail, insert the tek screws only on the side of the top rail toward the inside of the pool. DO NOT drive tek screws into the open dado channel.
3. Use a miter saw to cut the top rail to length or to prepare mitered corners.

4. When installing the top rail on a Grecian-shaped pool, it is ideal to start with the 45-degree corners of the pool.

Top Rail Installation (...continued)

5. Make a 22 ½-degree cut on both ends of the top rail and butt the mitered corners together in the 45-degree corner.
6. Use a miter saw and be sure to use scrap wood as a jig under the rail to cut it level.
7. Keep in mind that there are no 45-degree top rail clips to conceal the joints in the corners, so you will want to ensure that you measure the angle of the second cut to allow for any variation in the corner angle.
8. Once all the corners are secure, you can begin installing the straight sections of the top rail between the corners.

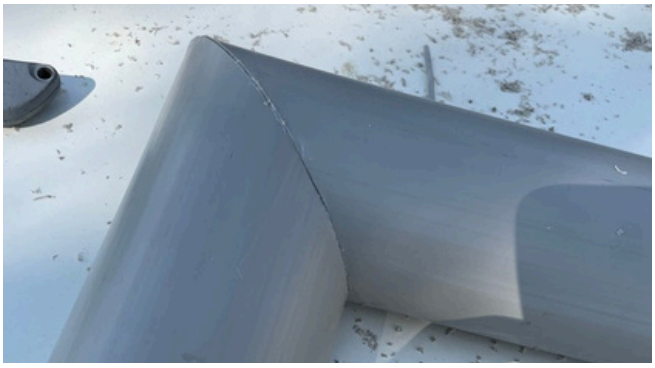
Tips for Cutting Mitered Corners

Cutting great-looking mitered corners enhance the look and quality of the pool. There are a few simple steps that will aid you in creating great-looking mitered corners like the one shown.

1. Use a jig for cutting the top rail. Seen right are two pieces of ½” plywood measuring 3” wide that ensure the top rail is lying flat before cutting. Whether it’s deck mount or standard top rail, you need to use the jig to account for the edge on the top rail, which has a profile of ½”.

Tips for Cutting Mitered Corners (...continued)

2. Start with cutting the corners first. Leave the length of the top rail alone until the mitered corner is fit into the angle (see left image). Cut the same angle on the second top rail piece, once again leaving the length of the stick. Now bring the joint together and make sure the fit is good. With the corner angles held in place, glue the mitered joint with super glue before attaching top rail with tek screws. Hold the joint together firmly for 30 seconds to allow glue to set



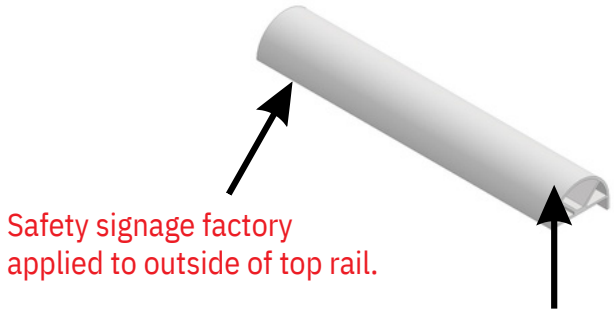
Top Rail Clip Installation

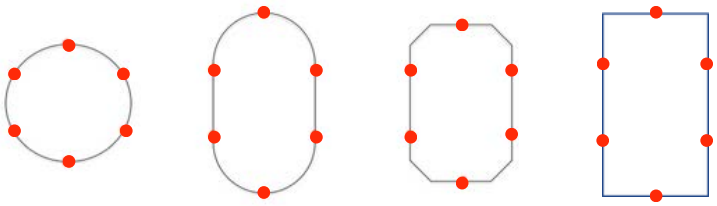
The top rail clips are designed to conceal the joints in the top rail pieces (see right image).

1. The top rail clips will be secured to the top rail using adhesive. You will apply the adhesive on the back of each top rail clip.
2. If standing inside the pool, you will hook the backside of the clip on the backside of the top rail and then push the front of the clip down until it snaps into place. The adhesive will help to secure the clip to the top rail.
3. Be sure to center the clip on the joint. The goal here is to make sure that the joint in the top rail is directly underneath the center of the clip.
4. You will repeat this process at every top rail joint around the pool.
5. When all clips are installed, you are ready to install the mandatory safety signage.

Top Rail Safety Signage

1. For your convenience and safety, **No Diving** stickers have been factory applied to the outside section of each top rail.
2. Additional safety stickers are provided with every pool kit and must be installed on the inside of the top rail.
3. Each safety signage pack will come with 14 of these top rail safety signs. These should be distributed evenly around the pool's perimeter (see images for recommended safety signage placement for each shape of the pool).





**Please note that some signage is applied in the factory, however it is your responsibility to apply additional signage as noted.*

Double F-Track Installation

The Double-F Track is installed around the entire top inner perimeter of the pool. The lower track will hold the liner in place while the top track provides an securing location for a beaded winter cover.

Tools needed: Impact driver, 5/16" nut driver, miter saw, tek screws and the supplied Double F-Track

IMPORTANT:

- **Double F-Track is installed by securing the track to the FACE of the pool wall.**

Oval Pools

1. The Double F-Track will come in 4' straight sticks and need to be bent to fit the radii of the pool. The track pieces are flexible and will require little effort to bend.
2. Begin with a stick of track starting on the step side of the pool. Always use a finished end where the stick meets the vinyl track on the step wall section.
3. Bend the track gently around the radius and overlap the straight wall joints by 4" – 6" as you work your way around the radius.
4. Secure with a tek screw every 18 inches (12" on radius sections)

5. Each piece of coping will be butted up to the previously installed section creating a continuous perimeter of coping around the pool walls (see image #2 above).
6. After completing one radius of the pool, continue around the pool and repeat the process on the other radius that ends in the steps.
7. When getting to the final straight wall section, you may need to cut the coping using a hack saw or miter saw with a suitable carbide tipped metal cutting blade.
8. Be sure to remove any rough edges with a file.

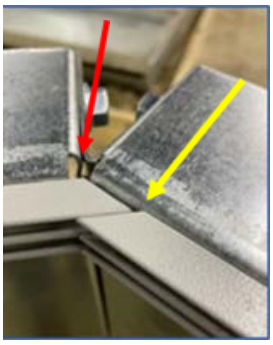
Round Pools

1. All Double F-Track pieces will be identical on round pools, so it is just a matter of choosing a starting location and working your way around the pool securing the track to the pool wall using tek screws every 18".
2. You may need to cut the final piece to fit properly.

Double F-Track Installation (...continued)

Grecian Pools

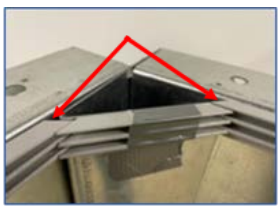
1. Start by installing the track at the Grecian corners of the pool.
2. Create a 45-degree corner out of a straight stick of track using a chop saw.
3. Remove any sharp edges with a file.
4. Secure the track to the wall using tek screws and place the 45-degree angle into the corner of the Grecian wall as shown in the images to the right.
5. When butting up 2 sticks of track, ensure to line up the channels evenly. You may need to cut pieces of track to length to fit between the corners and the full-length stick that you have installed.



- *For Grecian corners, measure the length of the straight track into the corner and then cut a 45-degree angle (see red arrow in image #1).*
- *Now measure the length of the other straight track (see yellow arrow in image #1) and cut with a 45-degree angle so liner tracks align.*
- *Now line up the tracks and fasten using Tek screws (see image #2).*

Rectangle Pools

1. Start in a corner and create a butt joint. On Rectangle Pools with 2' Radius Corners, you will bend the track to fit the radius of the corner. On Rectangle Pools with 6" Radius Corners, follow the red instructions below to fit a 45 degree corner.
2. You may need to cut the final piece to fit properly.
3. Plan to put cut ends into the corners and file edges to remove any sharp edges.

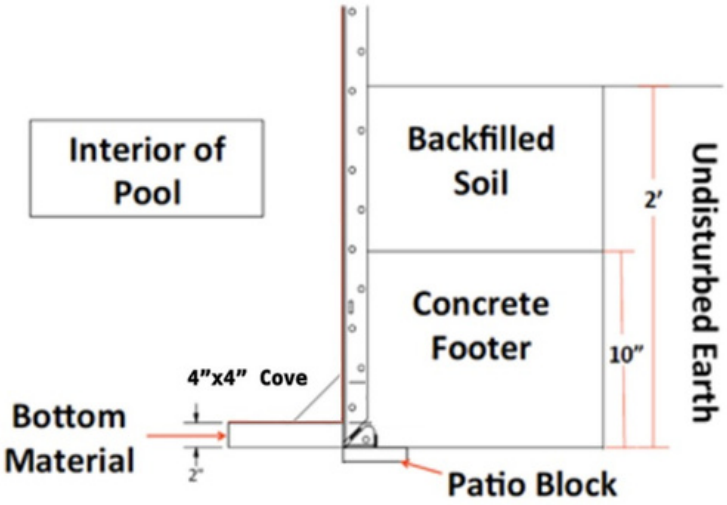


- *Cut a 45-degree angle on each of the straight Double F-Track lengths coming into the corner (see image #1).*
- *Track with two 45-degree angles. Line up the bead on the three pieces and use tek screws to finish the corner installation. Repeat on each of the four corners.*

***** There is a corner plate on rectangle pools with a 6” radius corner that is typically installed on the corners prior to cutting and installing the F-track / Coping. Image left shows a completed corner with the corner plate having been secured along with mitered top rail.**

Pool Interior Prep

1. Use duct tape to tape off the wall panel joints all the way around the pool. The tape aids in ensuring the liner does not show any of the seams from the wall joints.
2. A 2” layer of clean, washed masonry sand is required to be put down as the base for your pool floor.
3. Rake the sand out to create an even layer throughout the bottom of the pool. While raking the sand, pay attention to ensure that anything that could puncture the liner is removed from the sand (sticks, stones, roots, etc.).
4. The sand will need to be raked out and troweled to a smooth finish.
5. Form a 4" High x 4" Wide cove along the entire perimeter of the pool interior.
6. It is a good idea to slightly wet the sand before troweling to ensure the sand is compacted.



Liner Installation

When you are confident there is nothing on the pool floor that could damage the liner, you are ready to begin the installation of the liner.

1. The sand be raked out and troweled/tamped to a smooth finish.
2. The liner is heavy; it is suggested that two people transfer it into the pool.
3. To ensure the liner doesn't get damaged, it's best to remove your shoes before walking on the liner during the installation.
4. Set the liner in the center of the pool and begin unfolding it. Depending on your pool shape and the chosen location of your step, the seam on one end of the liner may align with your step. If it does, the seam should be aligned with the center of the steps since this area will be cut away later.
5. If your pool is a Rectangle, Freeform, Grecian or Oval, you will want to make sure that the liner is properly positioned (rotationally) in the pool.
6. If the liner is not correctly positioned in the pool when you start, it will be apparent, and you will need to adjust the liner before proceeding.
7. There will be a seam in the liner just above where the wall portion meets the 4" x 4" cove formed previously. It will follow near the top of the cove around the perimeter of the pool.
8. Before inserting the liner in the track, you will want to remove the step cover straps and the PVC straps, which later will hold the liner to the steps.

Image #1

Image #2

Image #1:
When removing the cover strap, be careful not to damage the piece as it will be reinstalled once the liner has been cut around the steps. There will be (3) mitered pieces to remove. Lift the corner to start with either your finger or a standard screwdriver.

Image #2:
The PVC strap is held on with screws that you will remove to remove the strap. Again, be careful as there is a neoprene rubber gasket behind this that you do not want to remove as it serves as a guide to remounting and waterproofing.

Liner Installation (...continued)

8. Start on one side of the pool and work your way around the pool **placing the bead located at the top of the liner into the bottom track on the Double-F Track**.
9. As you move around the pool, use your feet to help push the liner against the wall. The goal here is to get as many wrinkles out of the floor as possible.
10. Once the liner is inserted into the track around the entire perimeter of the pool and the floor has as few wrinkles as possible, you can remove a small portion of the liner from the coping and slide the liner vacuum tube (pictured right) down behind the liner.

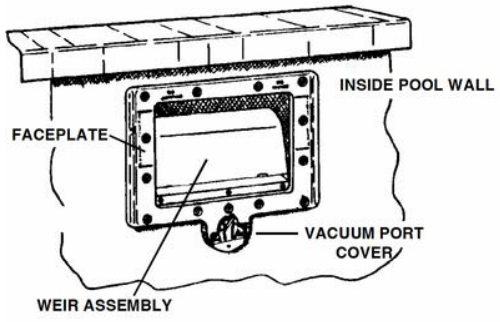
11. You want the liner vacuum tube to be as low as possible without sucking up sand.
12. A good seal is needed, so you may need to tape off the openings of the return, skimmer, and step area from the outside of the pool. If 6' Fiberglass Steps were installed, you need to cover the steps and be sure the liner is has airtight fit. (Taping a piece of plywood across the top of the steps can help here)
13. Once this is done, you can turn the pool vacuum on. After a few minutes, you will start to see the liner getting sucked back against the walls of the pool. (image shows vacuum head on the right side wall).

14. Begin adding water to the pool. If there are still wrinkles on the pool floor, you can again use your feet (without shoes) to help push the liner against the walls, which will help to remove the wrinkles.
15. Once the liner is wrinkle-free and sucked back against the walls, you can begin post-liner installation of your skimmer, return inlet, pool light, and steps.

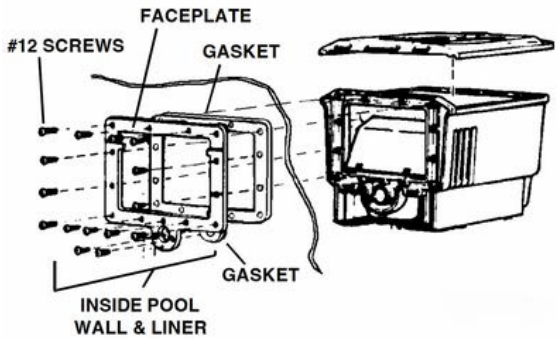
Skimmer Installation

1. Once the Skimmer is assembled per the included instructions, you will begin installing the skimmer onto the pool wall.

2. Firmly press a piece of plywood large enough to cover the skimmer wall cutouts against the liner and over the cutouts. **From outside the pool, use a razor knife to trim the liner away using the edge of the rectangular wall cutout as a guide. When finished, trim away the liner around the vacuum port cutout in the same manner.**



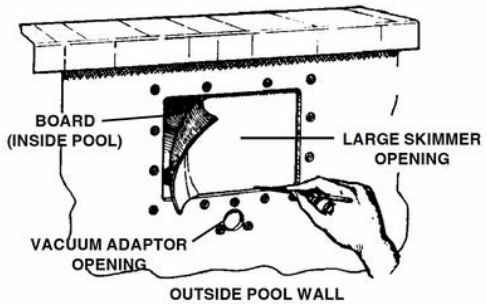
3. Install the upper faceplate u-gasket into the rectangular opening making sure that the liner edges are completely under the gasket. Adjust the gasket so that the flanges lay flat against both the liner and outside pool wall. Punch out the two top corner holes using a nail. Install the lower faceplate u-gasket into the vacuum port opening. Position the faceplate over the gaskets and insert two large self-threading screws into top corner holes and carefully push the screws through the holes which have been pierced in the liner. From outside the pool, align the skimmer body with these screws. Lightly tighten the two screws



4. Using a nail and the faceplate as a guide, pierce the 13 additional holes through the liner. Insert and lightly tighten the remaining 13 screws through the faceplate, gaskets, liner, pool wall, and into corresponding holes on the skimmer. Tighten all screws firmly and evenly, alternating left and right, top and bottom.

NOTE: The gasket around the vacuum adaptor is required to assure a tight seal around the vacuum adaptor when vacuuming.

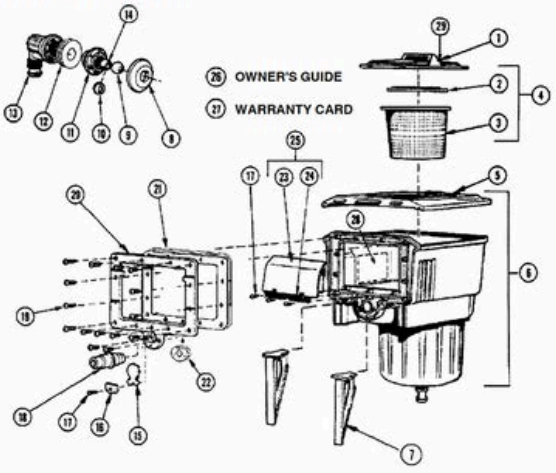
5. Attach vacuum port cover and retainer to faceplate using screw.



Return Installation

1. Locate a board large enough to cover the return fitting cutout. From inside of pool, use the board to hold the liner against the cutout in pool wall. Keep hands away from hole to avoid injury. From outside of pool, use the cutout as a guide and cut away the liner with a razor knife.
2. Install the return fitting u-gasket into the wall opening making sure the liner's edge is trapped under the gasket. Insert the threaded end of the return fitting adaptor through the wall from inside pool.
3. Hold the return fitting body so the hose fitting end points straight up while turning the adaptor from inside the pool. When the adaptor just begins to crush the gaskets, hold the adaptor from turning while rotating the body clockwise to its straight down position.
4. If the assembly does not feel snug, rotate the return fitting body back to the up position. Rotate the adaptor inside pool an additional 1/4 turn, then rotate the body to the down position again. Repeat this procedure as required.
5. Install eyeball insert into eyeball. Hold the eyeball inside the adaptor with insert toward inside. Thread on the return fitting cover to secure eyeball position so it directs flow away from skimmer opening. Do not overtighten.

EXPLODED PARTS
Deluxe Thru-Wall Skimmer
MODELS 0-2094-013 / 0-2094-015



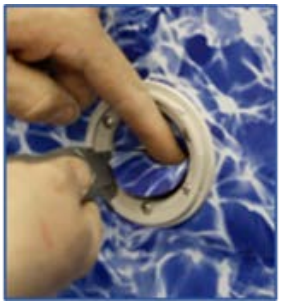
MODEL 0-2094-013 PARTS LIST (Almond)

ITEM	P/N	QTY	DESCRIPTION	ITEM	P/N	QTY	DESCRIPTION
1	1107-1356	1	Lid & Caution Label Assy.	16	340-1271	1	Vac Port Cover Retainer
2	321-1002	1	Basket Handle	17	330-1008	4	#8 x 1/2" Screw
3	340-1139	1	Basket	18	340-1253	1	Vacuum Hose Adaptor
4	1116-1045	1	Basket Assembly	19	330-1004	15	#12 x 27/32" Screw
5	340-1232	1	Light Oak Cover	20	340-1274	1	Faceplate
6	1121-1703	1	Deluxe Skimmer & Decal Assy.	21	307-1029	1	Upper Faceplate U-Gasket
7	340-1248	2	Support Brace	22	307-1030	1	Lower Faceplate U-Gasket
8	340-1238	1	Return Fitting Cover	23	1119-1032	1	Weir Float
9	348-1027	1	Eyeball	24	340-1173	1	Weir Hinge
10	340-1240	1	Shut-off Disc	25	1119-1033	1	Weir Assembly
11	340-1237	1	Return Fitting Adaptor	26	365-1850	1	Owner's Guide
12	307-1031	1	Return Fitting U-Gasket	27	—	1	Warranty Card
13	340-1773	1	Return Fitting Body	28	360-1977	1	Operating Instructions Label
14	340-1278	1	Eyeball Insert	29	360-1795	1	Caution Label
15	348-1028	1	Vac Port Cover				

Pool Light Installation (Part 2)

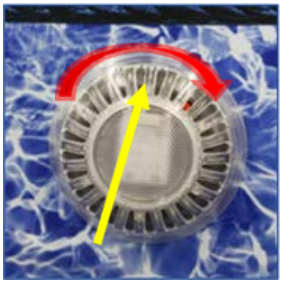
During-liner installation

1. Continue to apply some pressure to the vinyl liner with your foot at the base of the wall to ensure the vinyl is taught as it fills with water.
2. Locate the vinyl clamp ring (see left image below). Be sure the word “TOP” is aligned at the top. (See image below left)
3. Locate the holes in the niche assembly and puncture the liner with your awl once you are aligned.
4. Find a second hole and repeat the process.
5. The remaining holes should line up once you have two screws in.



Once you have finished installing the vinyl clamp ring, use a utility knife to remove the vinyl liner, starting at the edge of the ring and cutting along the outside edge of the ring (see image right).

6. Pull the red terminal cap out of the now exposed opening in the vinyl and remove the it by unscrewing it from the back of the plug.
7. Locate the light and remove the protective cap from the back of the light.
8. Align the terminal pins on the plug face with the insert plug firmly into the back of the light.
9. Use the screws to fasten the plug to the light (see middle right image).

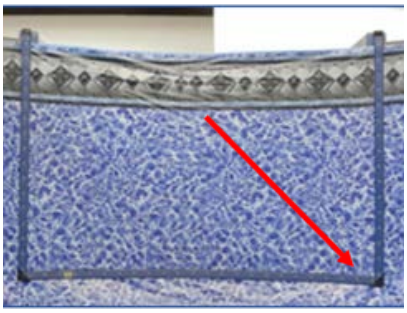


Carefully fit wiring back into the niche assembly tube. Align the light so that the arrow mark on the face is aligned at approximately 11:00 if this were a clock face. Hold the light firmly against the liner with your open palm and turn to the right until you hear a “click”. This completes the installation.

6' Step Installation (Part 2)

During-liner installation

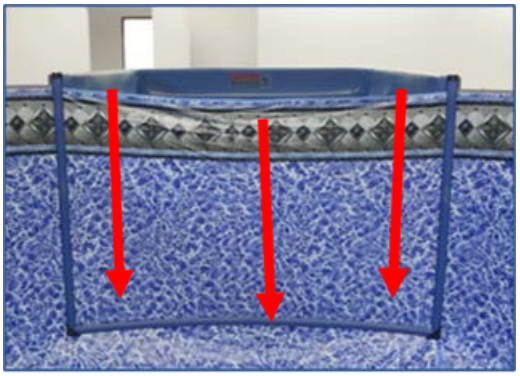
1. Apply some pressure to the vinyl liner with your foot at the base of the wall to ensure the vinyl is taught as it fills with water. *Keep the pressure on while attaching the gasket tracks.*
2. With the liner wrinkle-free and stretched, use your finger to feel for the rubber gasket still attached to the step face, and find one of the screw holes.
3. Use your awl to mark the spot, then locate the gasket over this and secure it with a screw.
4. Advance down the gasket a couple of screw holes and once again, pierce it with your awl and secure with a screw.
5. In the bottom two corners, you will slip on the black corner piece before the vertical and horizontal gaskets are tightened securely. The PVC straps will also fit into these rubber corners and cap guards.



6. Repeat the step with the awl for each of the (3) tracks.
7. You must be careful to only hand-tighten, as the fiberglass can easily be stripped with too much pressure.
8. Once the gaskets have been securely fastened, align the PVC straps inside of the black 90-degree corner piece as well as the cap.
9. Start at one end with your palm and press the bead back into the groove until you hear it snap into place. You may want to pound lightly with an open palm.
10. Now, it's time to cut the liner area inside of the step entrance. Use a utility knife to make a single cut from the center of the liner by cutting through the bead along the top of the liner.

6' Step Installation (Part 2) (...continued)

11. Cut to the track, however; avoid cutting into the PVC strap or gasket below.
12. Come back to the sidewalls and cut along the inside edge of the gasket strip using the edge of the stripping as your guide.
13. Repeat on the other side and then cut across the bottom strip to remove two pieces of vinyl.



Finished pool steps.

Fill With Water!