hydrosphere SERIES

Semi-Inground Pool by Doughboy

Inground Installation Guide

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Base Kit Components

52" Walls
Adjustable Braces
Coping with Tek Screws
Bolt Pack
Rebar
Safety Signage

Additional Components

6' Step Kit (optional)

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

Skimmer Kit

Waterway Renegade Vinyl Liner Pool Skimmer
Return Fitting, Eyeball, and Faceplate

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

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 to locate the skimmer wall panel and place it in the desired location.
- 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 sand is kept in the center of the pool area, away from where walls will be placed.
  - Complete step installation and set wall height. 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 Adjustable Brace. All v-stake cutouts have v-stake inserted and at least one rebar piece per wall section on straight walls.

Installation Schedule (...continued)

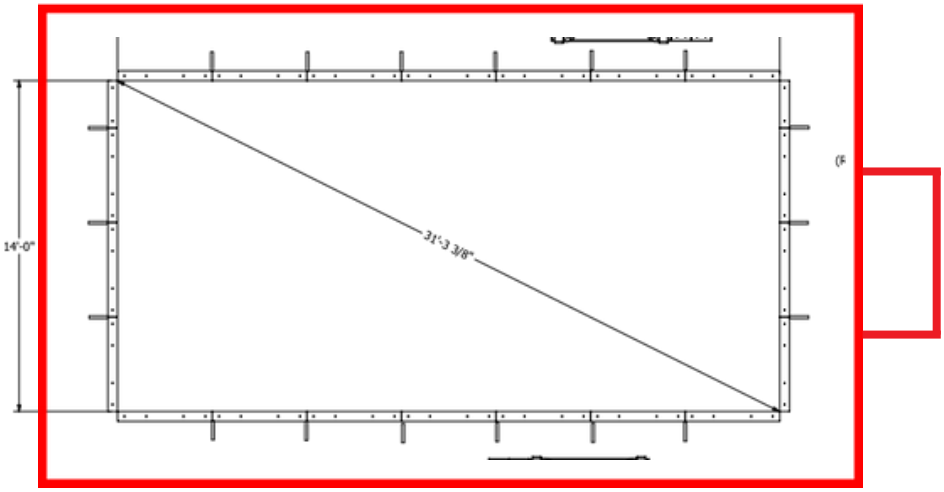
Day 2 - Pool Assembly

- 8:00am
  - Two people: Coping installation.
  - One person: Pre-liner install tasks: step preparation, return inlet, light, and skimmer set.
- 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: 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 inserted, 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. Choose the elevation for the top surface of the pool. If you are using CP2 Bullnose Coping, make sure to note that the top of the coping will also be the top of the finished deck. If using flat track coping, be sure to add the height of the deck material you will be using (not provided, examples: concrete, pavers, stone, coping bricks, etc.)

   IMPORTANT: The top surface of the deck must be at least 2" to 4" above the highest surrounding ground elevation to prevent residual water overflow into the pool.

   The height of the Hydrosphere Series Pool Wall is 52" **plus the height of your coping ...** this must be added to the wall height to get the total wall height.

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

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

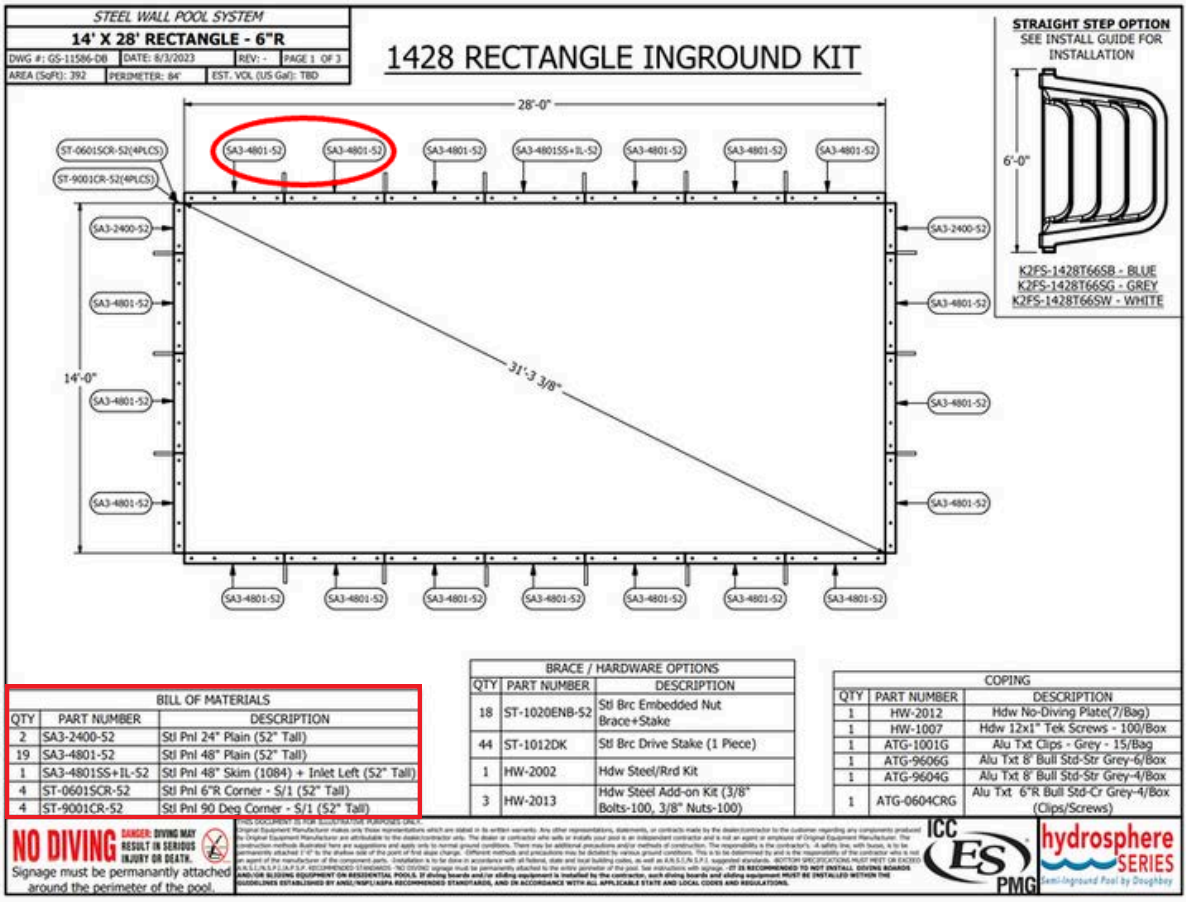
5. In the unlikely event of a high water table, it may be necessary to install a submersible sump pump next to the excavated area to pump water away from the pool area. This process must be completed before moving on to wall installation.

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" x 52" - Plain**. 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. 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.



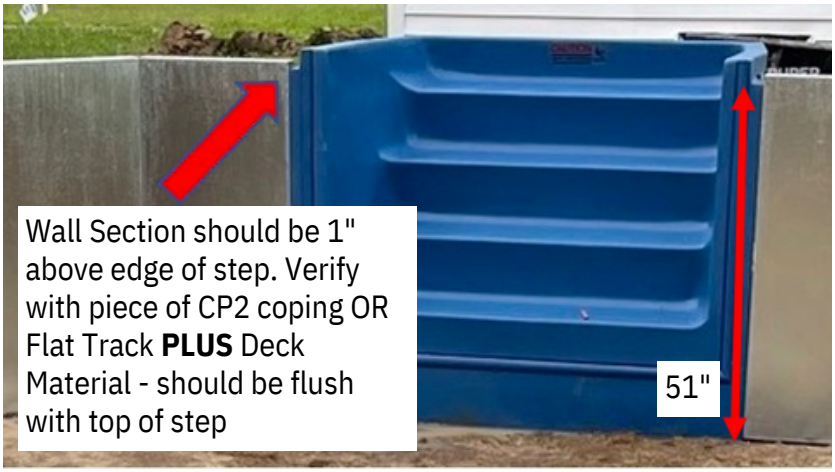
6' Step Installation (Part 1)

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 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)



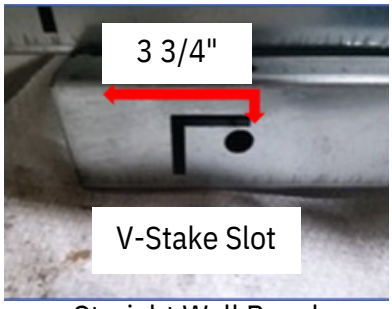
Semi-Inground Top Rail shown. Concept is the same with CP2 Coping & Flat Track Coping **PLUS** Deck Material (Paver/Concrete/Stone/etc)

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

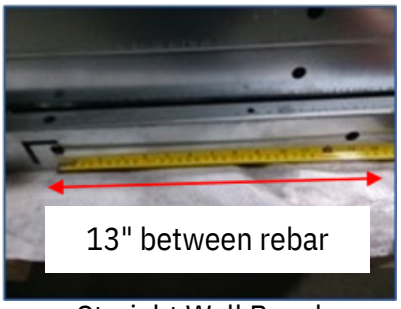
- Make sure the panel is flush with the step face from top to bottom. C-clamp the wall section in three spots to ensure a strong hold during the drilling of the step.
- Check that the three clamps are not covering any of the outside holes on the panel.
- The step will not have holes on the flanges. Use 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.

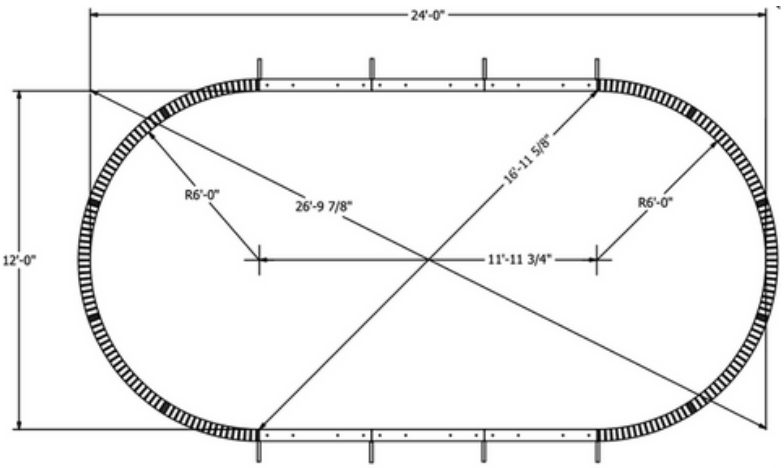
Wall Assembly (...continued)

Set wall panels, corner pieces and 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.
  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.

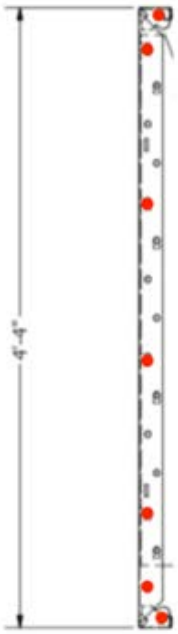
Wall Assembly (...continued)

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. Bolt together straight wall sections - A bolt must be placed in ALL the inside edge holes *(illustrated in red on the right)*. Once the braces have been attached *(next section)*, you may secure additional holes if desired and tighten hardware.



- 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 (Semi-Inground Buttress Braces Shown).

Brace Assembly/Pool Leveling

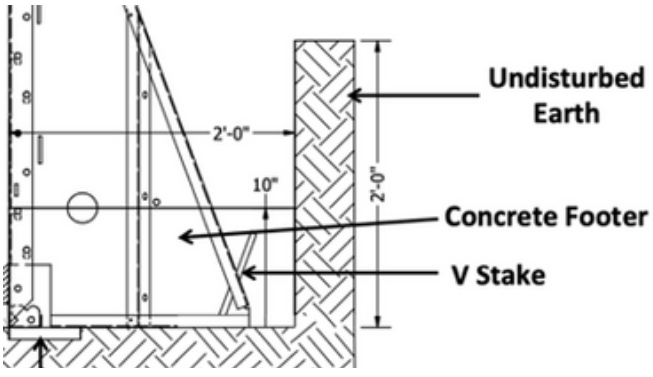
1. Each Brace will attach at the top and bottom of the panel as shown in the images to the right with a nut and bolt. Brace locations are marked on your pool drawing. The brace part number is ST-1020ENB-52.

2. **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.**

3. 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.

4. **PLUMBING THE WALLS:** Each adjustable brace has a threaded rod and dual nut system that allows you to plumb the pool wall. Adjust the plumbness by adjusting the nuts then lock into place. Additional adjustments can be made after the concrete footer has been poured if necessary.

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)

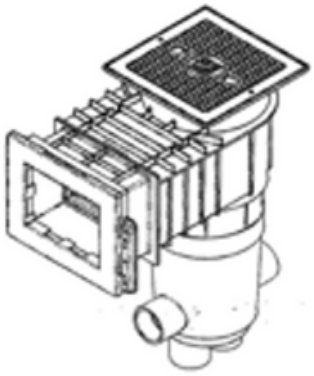
When installing around skimmers and returns as shown in the image below, measure the position of the return inlet and cut the insulation panel to allow access for the filtration system to be completed

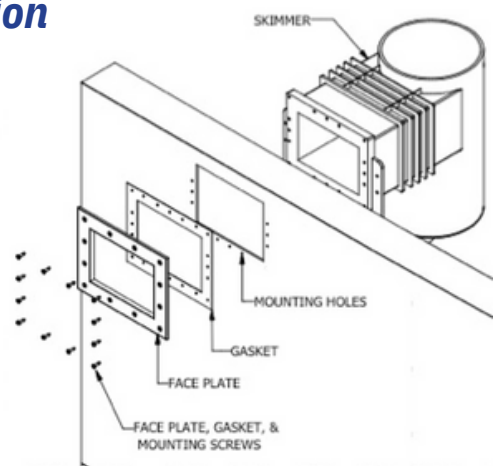
DO NOT mount the skimmer prior to cutting and installing the insulation panel. This will give you the cleanest look and ease of installation.

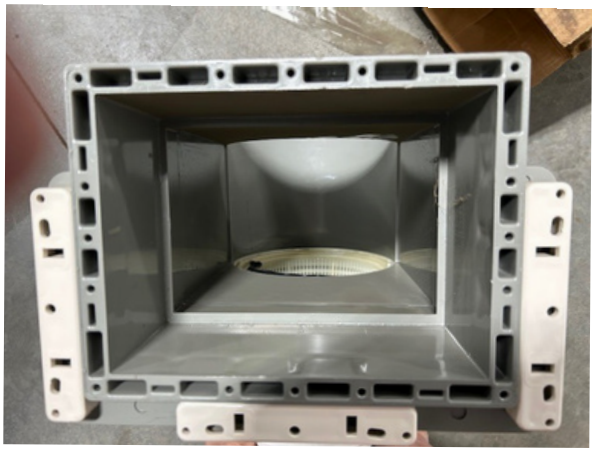
Mark the skimmer opening by placing the insulation panel against the wall with the skimmer cutout in the steel. Use the skimmer face plate then to outline the amount of material to be removed to allow the skimmer to be installed.

Skimmer Installation (Part 1)

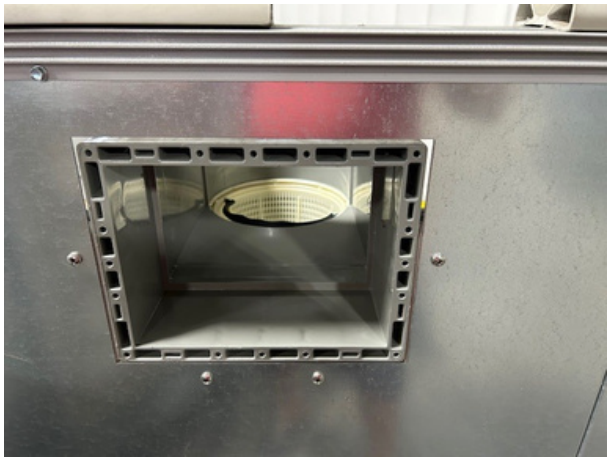
Pre-liner installation

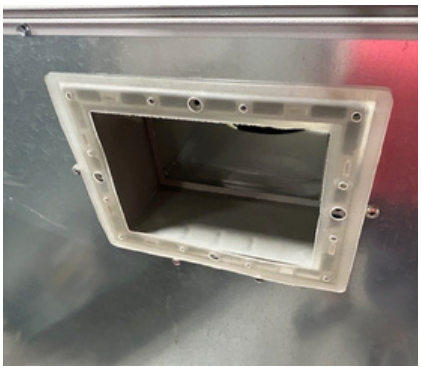






1. Mount the gasket on the skimmer face by aligning the tabs on the back of the gasket with the tab slots in the skimmer face. Then push into place on the inside face of the pool wall.
2. Secure the skimmer to the pool wall by using the four 1¼" long Phillips's pan head screws provided.





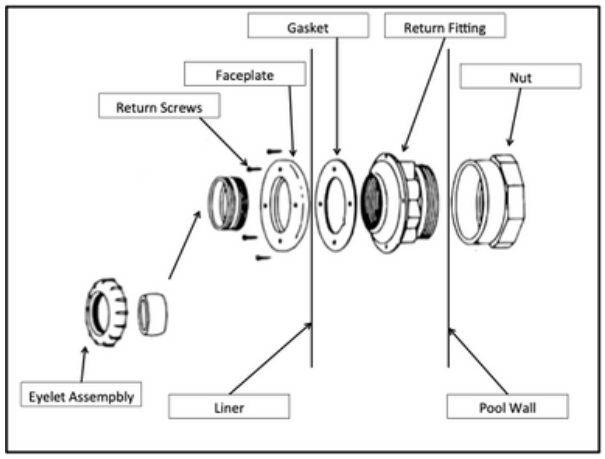
Tip: Gasket is mounted on the pool side wall, and tabs align with slots in skimmer face. It is a good idea to secure the edges of the gasket at this time with duct tape to aid in lining up your second gasket and faceplate (see image left).

Return Inlet Installation (Part 1)

Pre-liner installation

Tools needed: screwdriver, awl, and utility knife

1. Insert gasket into the return fitting and pass through the pre-cut hole for return.
2. Tighten the locknut on the outside of the pool wall to hold return fitting tightly in place.



Pool side with Return Fitting and Gasket.

Outside pool wall with lock nut.

Pool Light Installation (Part 1)

Pre-liner installation

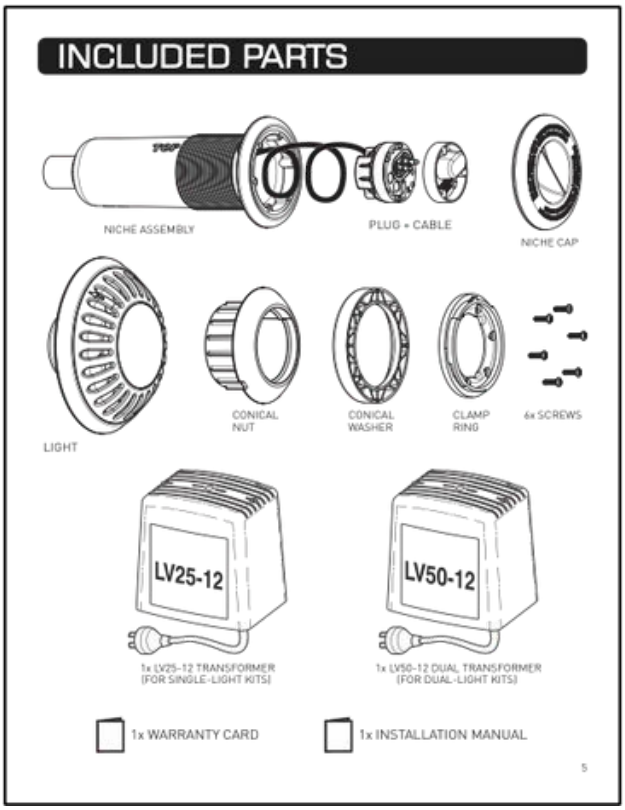
1. Look at the backside of the straight wall that the light is to be installed on. Note whether there is a rib centered on the wall. Do not drill where a rib is present. Measure over to the left or right 3 ½" to ensure that you are far enough away from the rib on the back of the wall panel.
2. Measure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

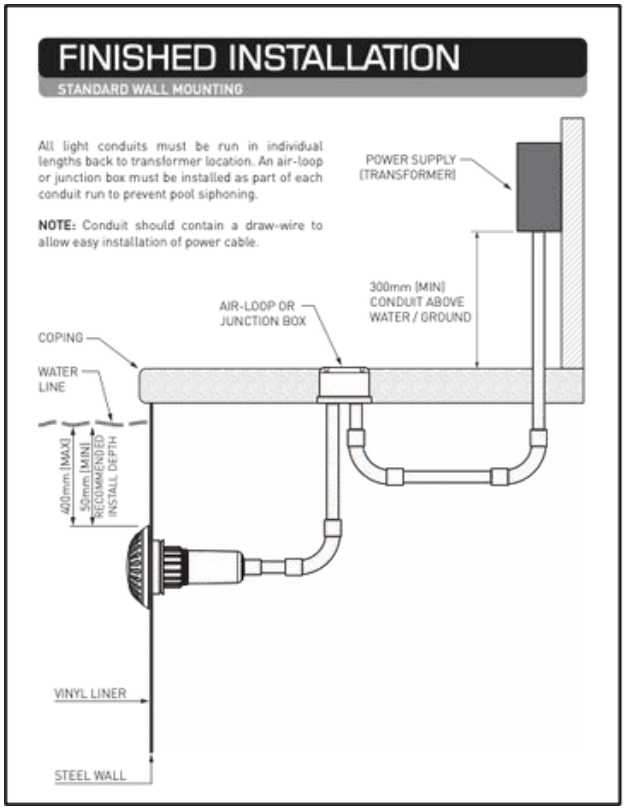
Tip: Drill the hole from the inside of the pool using either a 2 ¾" or 2 5/8" hole saw. Use a drill that has ample torque to complete the drilling of the hole. Be sure to hold the drill firmly with both hands as the hole saw may grab and cause injury.

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

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)

WIRING GUIDE

⚠WARNING **RISK OF FIRE OR ELECTRIC SHOCK, DISCONNECT ELECTRIC POWER BEFORE SERVICING.**

IF INSTALLATION INVOLVES RUNNING WIRING THROUGH A STRUCTURE, SPECIAL WIRING METHODS ARE NEEDED.
FOR CANADIAN INSTALLATIONS, SUPPLY CIRCUIT MUST BE PROTECTED BY A CLASS A TYPE GFCI (GROUND FAULT CIRCUIT INTERRUPTER.
DO NOT CONNECT TWO OR MORE TRANSFORMERS/POWER SUPPLIES IN PARALLEL.

WIRING INSTRUCTIONS

PRIMARY

Connect **NEUTRAL** (WHITE) lead from the supply input to the **WHITE** lead on the transformer.
Connect **ACTIVE** (BLACK) lead of supply input to one (1) of the two (2) available input leads on the transformer. Input lead to be selected based on your desired output voltage. (Refer to input lead table (right) for more information.
*ENSURE UNUSED INPUT LEADS ARE ADEQUATELY INSULATED (CAPPED)

SECONDARY

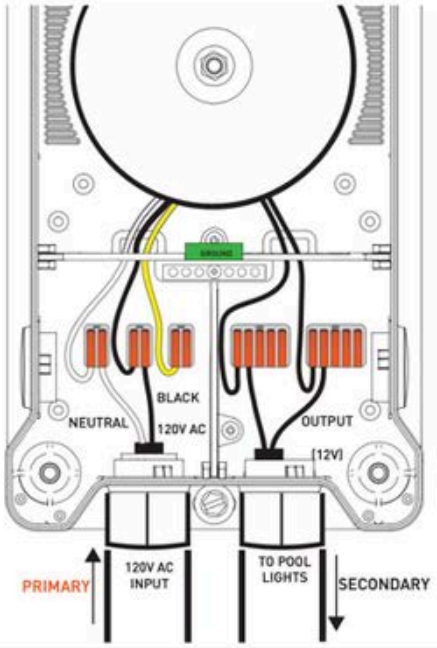
Connect (BLACK) output wires to pool light cable.

120V INPUT LEAD COLOUR IDENTIFICATION	
WHITE	NEUTRAL
BLACK	12V (OUTPUT)
YELLOW	13V (OUTPUT)

NOTICE

Ensure the unused input lead remains adequately insulated. (CAPPED)
DO NOT CONNECT UNUSED ACTIVE INPUT TO GROUND.

WIRING EXAMPLE (12V CONNECTION SHOWN)



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

Coping Installation

The coping is installed around the entire top perimeter of the pool. The track will hold the liner in place.

Tools needed: Impact driver, 5/16" nut driver, miter saw, tek screws and the supplied Coping

IMPORTANT:

- **CP2 Coping and Flat Track Coping are installed by keeping the front lip of the coping against the top edge of the pool wall and securing the coping to the TOP of the pool wall.**
- **CP2 Coping ONLY: Once all coping is attached to the pool wall, cover joints with CP2 Coping Clips.**

Oval Pool: Coping Installation

1. The Coping for the straight sides of the pool will come in 4' straight sticks. The coping for the curved ends of the pool will come in pre-formed/curved sticks.
2. Begin with a stick of Coping 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. Secure with a tek screw every 18 inches on straight sections and every 12" on curved sections.
4. Each piece of coping will be butted up to the previously installed section creating a continuous perimeter of coping around the pool walls.
5. After completing one radius of the pool, continue around the pool and repeat the process on the other radius that ends in the steps.
6. 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.
7. Be sure to remove any rough edges with a file.

Round Pool: Coping Installation

1. All Coping 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 Coping to the pool wall using the tek screws every 18".
2. Place the coping on the top of the pool wall, with the lip against the face of the panel, then secure the Coping using tek screws
3. You may need to cut the final piece to fit properly.

Coping Installation (...continued)

Grecian Pool: Coping Installation

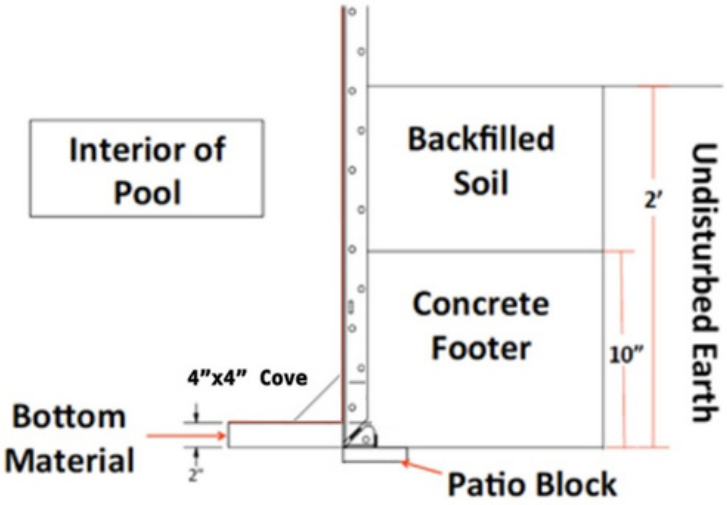
1. The coping for the corners of Grecian pools is pre-formed to fit the angle of the corner.
2. Start by installing the Coping at the Grecian corners of the pool.
3. Place the coping on the top of the pool wall, with the lip against the face of the panel, then secure the Coping using tek screws
4. Continue installing the straight side pieces of Coping. You may need to cut pieces of Coping to length to fit between the corners and the full-length sticks that you have installed.

Rectangle Pool: Coping Installation

1. The coping for the corners of Rectangle pools is pre-formed to fit the curve of the corner.
2. Start by installing the Coping at the corners of the pool.
3. Place the coping on the top of the pool wall, with the lip against the face of the panel, then secure the Coping using tek screws
4. Continue installing the straight side pieces of Coping. You may need to cut pieces of Coping to length to fit between the corners and the full-length sticks that you have installed.

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 track on the Coping.
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 (Part 2)

During-liner installation

1. Push the second gasket onto the back of the faceplate the same way you put the gasket onto the face of the skimmer during pre-liner installation.
2. Be sure to apply pressure with your foot, or with a tube bag of sand, on the liner below the skimmer opening to ensure you do not get any tears or stretch marks after the pool is filled.
3. Tightly fasten the faceplate/gasket to the skimmer face by the 1¼" Phillips flat head screws provided (12 screws total).
4. Make sure to pierce the vinyl liner through the faceplate holes one at a time before inserting screws using an awl to line up the holes.

Once you have two holes lined up with the use of the awl, the rest of the holes will line up nicely. Once all screws are in, use a utility knife to cut the vinyl. First, in a downward center cut. Then, cut from center along the top and bottom frame to the left and right. Finally, cut downward to remove the two pieces.

Return Inlet Installation (Part 2)

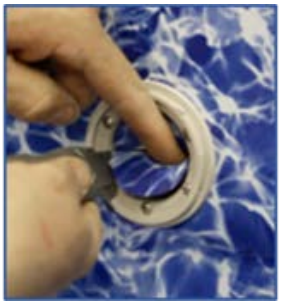
During-liner installation

1. Since we are doing dry cut liners, be sure the liner is tight into the base of the pool below the return before puncturing the liner.
2. Use your foot or tube bags of sand to provide some stretch.
3. Line up the faceplate over the gasket; you will need to feel for the holes in the gasket to line up the faceplate correctly.
4. Use an awl through the faceplate to mark the location of the hole in the gasket.
5. Use a screwdriver and secure the first screw.
6. Locate the second hole in the same fashion using the awl and secure.
7. The rest of the holes should be lined up at this point.
8. With the awl, mark the last two holes and tighten the screws hand tight.
9. Using a utility knife, start at the outside edge of the return fitting and cut around the hole to remove the liner.
10. Screw-in the eyeball directional fitting.

Pool Light Installation (Part 2)

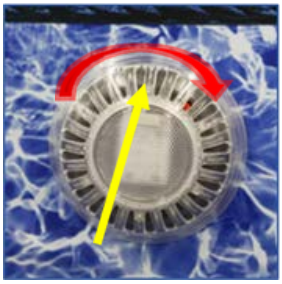
During-liner installation

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).

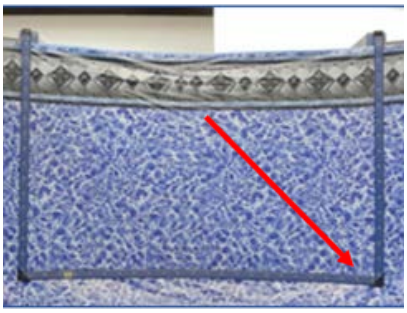


Carefully fit wiring back into the niche assembly tube. Align the light so that the arrow mark on the face is aligned at approximately 11:00 if this were a clock face. Hold the light firmly against the liner with your open palm and turn to the right until you hear a “click”. This completes the installation.

6' Step Installation (Part 2)

During-liner installation

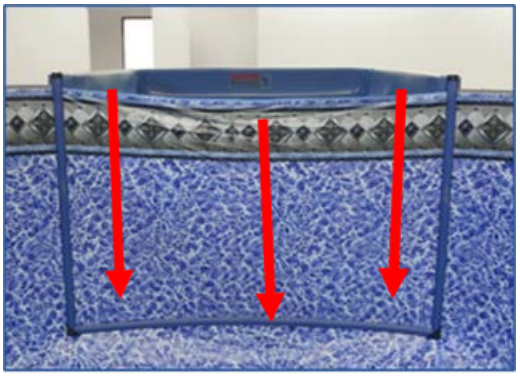
1. Apply some pressure to the vinyl liner with your foot at the base of the wall to ensure the vinyl is taught as it fills with water. *Keep the pressure on while attaching the gasket tracks.*
2. With the liner wrinkle-free and stretched, use your finger to feel for the rubber gasket still attached to 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!