



Samson 52"

SEMI-INGROUND INSTRUCTIONS





Samson 52" Semi-Inground Pool

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A INTRODUCTION

Installing your Samson 52" Pool Kit can be a rewarding project for homeowners, but it requires careful planning, preparation, and attention to detail. This guide provides complete instructions to help you through each step of the installation process. Please read the entire guide before beginning, and follow all steps in order for the best results.

This kit is designed for semi-inground and fully inground installations only. It is not intended for above-ground use. Always ensure that you have the proper permits and have checked local building codes before starting construction.

SAFETY INFORMATION

- **No Diving or Jumping:** A 52" deep pool is not safe for diving. Serious injury or death could occur.
- **Electrical Safety:** Keep all electrical devices away from the pool area unless installed by a licensed professional to code.
- **Child & Pet Safety:** Never leave children or pets unattended around the pool. Use barriers, fences, or covers as required by local codes.
- **Construction Hazards:** During installation, wear proper safety equipment (gloves, eye protection, sturdy footwear). Take caution with tools, heavy lifting, and concrete work.
- **Call Before You Dig:** Contact your local utility companies to mark underground pipes, gas, and electrical lines before excavation.
- **Follow Manufacturer Instructions:** For pumps, filters, heaters, skimmers, and other components, always refer to and follow the original manufacturer's safety guidelines.

B TOOLS AND MATERIALS

TOOLS:

- Tape measures (at least two)
- Carpenter's level (4 ft or longer) or transit level for larger sites
- Shovel, hoe, and rake
- Wheelbarrow
- Tamping tool or plate compactor
- Spray paint or chalk line for marking
- Stakes and string line
- Drill with assorted bits (3/8" bit, 5/16" nut driver head, #2 and #3 Phillips bits)
- Hammer
- Wrenches and socket set (including two 9/16" wrenches or sockets)
- Screwdrivers (#2 and #3 Phillips, flathead)
- Mitre saw (for top cap cuts)
- Utility knife or razor knife
- Clamps
- Drift pins (for aligning panels)
- Rounded-bottom trowel and a 36" flat leveling board (for bottom finishing)
- Shop vacuum (to remove debris before liner installation)
- Safety gear (gloves, protective eyewear, dust mask, sturdy footwear)

MATERIALS:

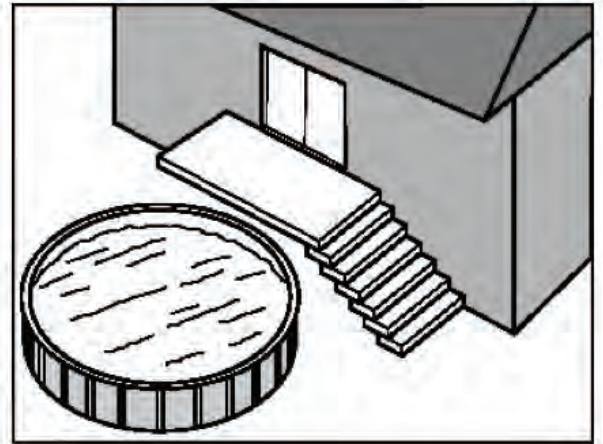
- Clean sand (2" base inside pool area) or approved sand/vermiculite mix
- Concrete (2500 PSI with 4" slump, truck-delivered recommended) and rebar for collar
- Double-sided tape (for top cap covers)
- Duct tape (for general temporary holding and protection)
- PVC-to-ABS glue (e.g., Oatey All-Purpose)
- Schedule 40 PVC pipe for step supports and skimmer support
- Hole plugs (supplied with kit)
- Bolts, nuts, braces and hardware (supplied with kit)
- Top cap covers and coping clips (supplied with kit)

C CHOOSING A LOCATION

1. SELECTING THE SITE:

Pay special attention to choosing the right location for your pool:

- Choose a large area, as flat and level as possible.
- Choose a spot on dry, firm earth. Do not install the pool on asphalt, tar paper, sand, gravel, peat moss, wood or chemically treated soil.
- Check with your pool dealer to see if Nut Grass grows in your area. This type of grass may grow up through your liner.
- Sloped areas will need to be made level by digging away high spots, not by filling low spots. Be prepared to hire earth-moving equipment if necessary. **(Ex. 1)**



Ex. 1



2. THINGS TO AVOID

Do not locate your pool near or on any of the following:

- Overhanging trees branches. **(Ex. 2)**
- Overhead wires and clotheslines. **(Ex. 3)**
- Buried pipes and wires-contact your gas, electric and telephone utilities to find buried pipes and wires before you dig. **(Ex. 3)**
- Hilly and uneven terrain. **(Ex. 4)**
- Areas with poor drainage.
- Grass, stone and roots. Grass will rot underneath the pool liner, and stones and roots will damage the pool liner.
- Areas recently treated with oil-based weed killer, chemicals or fertilizers.



Ex. 2



Ex. 3



Ex. 4

C CHOOSING A LOCATION (CONT.)

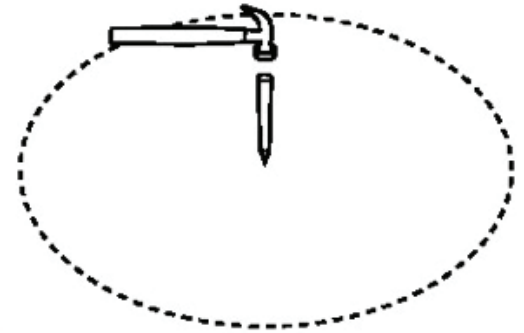
3. PLAN AHEAD

- Will you be adding an adjacent deck later? Be sure to leave room.
- Will you be using pool accessories or other appliances that need electricity or gas? Locate your pool near these services or plan to have them installed later by a licensed contractor.

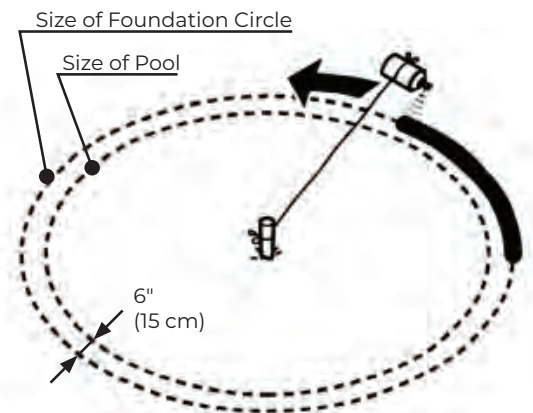
D PREPARE THE FOUNDATION OF YOUR CIRCULAR OR OVAL POOL

1. MARK OUT THE AREA

A. Drive a peg into the ground at the center of the area where you want your pool.



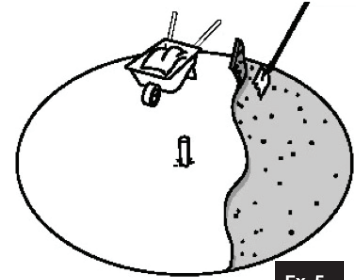
B. Use a length of string tied between the peg and a can of spray paint and mark a circle on the ground. Choose the length of string you need for your pool from the chart. The circle will be 3' bigger all round than the pool. This is for the collar pour.



Pool Size	Length of String	Length of 2x4
12'	9'-0"	9'-0"
15'	10'-6"	10'-6"
18'	12'-0"	12'-0"
24'	15'-0"	15'-0"
30'	18'-0"	18'-0"
33'	19'-6"	19'-6"

2. REMOVE THE SOD

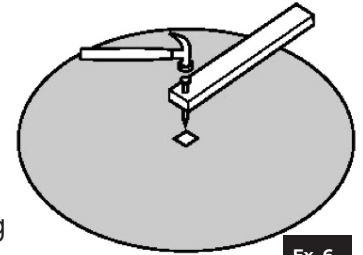
- Remove all sod and plants from the circle. **(Ex. 5)**
- Remove any sticks, stones and roots from the circle.
- Dig 1' down at the lowest point of the ground.



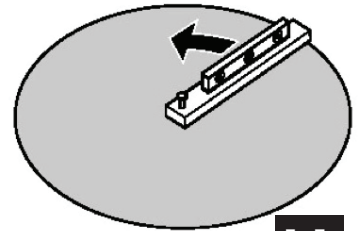
Ex. 5

3. MAKE THE AREA FLAT AND LEVEL

- A. Replace the center peg with a flat-topped stake, at least 1" square and 6" long. Drive it down flush with the ground surface. **(Ex. 6)**
- B. Nail one end of a straight plank (2 X 4) to the top of the stake. Choose the length of the plank from the chart above. Use a nail long enough to hold the end of the 2 X 4 to the stake while you rotate it in a circle.
- C. Put a carpenter's level on the 2 X 4 and swing the board in a circle to find the high and low spots. **(Ex. 7)**



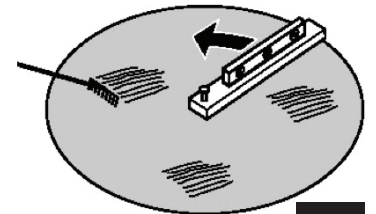
Ex. 6



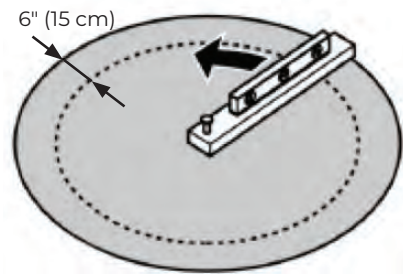
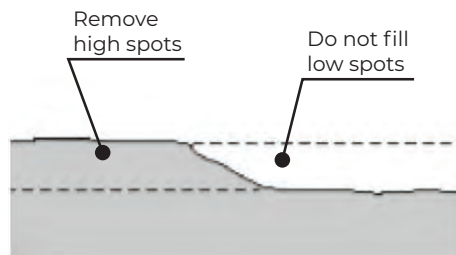
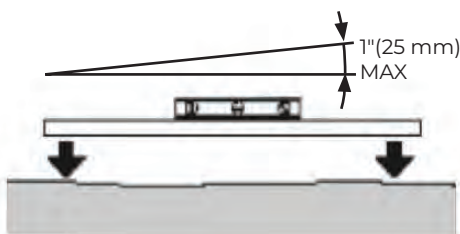
Ex. 7

Remove all the high spots with a shovel, hoe, or rake. **(Ex. 8)**

Be prepared to hire earth moving equipment if you need to level a large area.



Ex. 8



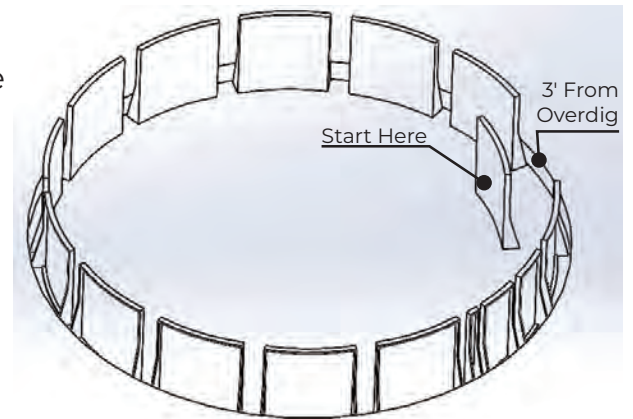
Remember your pool must be level within 1" across the diameter of the pool.

- D. Do not fill in low areas. Filling will create an unsafe foundation for your pool. Small dips and hollows may be filled in, but the soil must be hardpacked with a tamping tool.

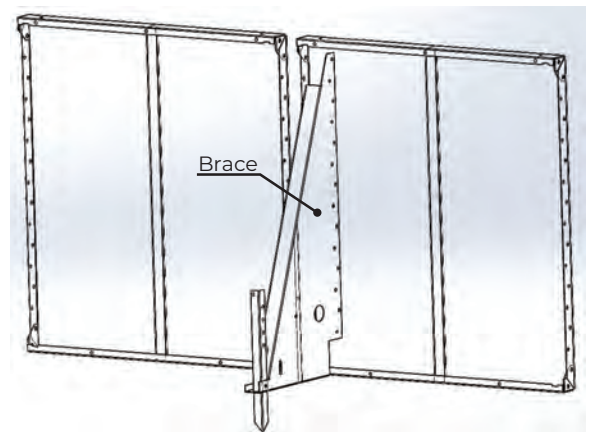
- E. Recheck the outer of the circle, where the pool wall will be. Make sure there are no high spots. The bottom edge of the pool wall must rest flat on the ground and have no gaps under it.

4. PANEL AND BRACE ASSEMBLY

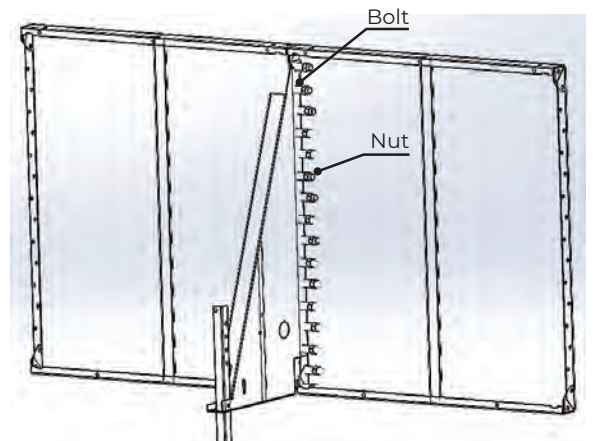
Lay the panels around the perimeter of the pool. Place the face, of the first panel, 3' inside the perimeter of the over dig.



A. Place 2 panels together with a brace to the inside of the panel flange. Not in between the panels.



B. Place bolts in the holes of the panels and braces, then apply the nuts loosely. Continue this process all the way around the pool.



C. Use the carpenter's level on the face of the panel to make sure they are not leaning in or out.

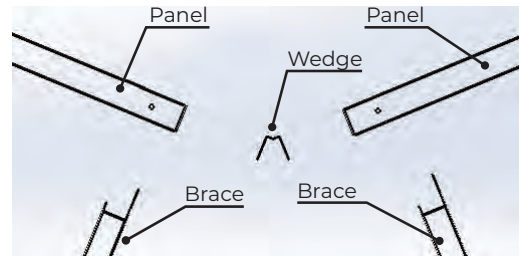
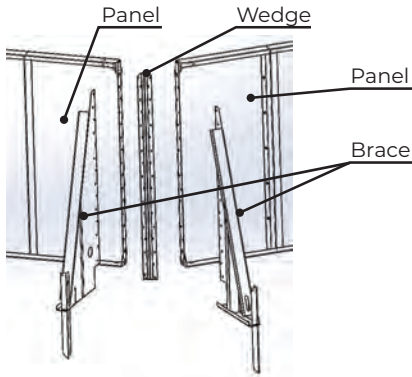
D. Use cross measurements to check if the pool is square. Measure from joint to joint at different locations.

E. Tighten the nuts and bolts on all panels. Double check the cross measurements to keep the pool square.

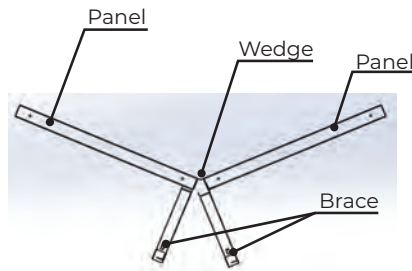
F. After the panels are bolted together spread 2" of sand (no pebbles) over the foundation area inside the panels. Use a rake to make the sand flat and smooth.

5. GRECIAN CORNERS

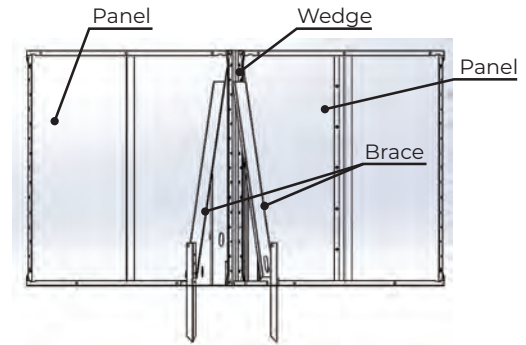
A. When assembling a Grecian corner, the Grecian Wedge will determine the angle of the next panel. **(Ex. 17)**



B. Bolt the wedge and brace to straight side of the Grecian pool. Be sure that the brace is on the inside of the flange of the panels.



C. Use this process on all 8 corners of the Grecian pool.



D. Use cross measurements to check if the pool is square.

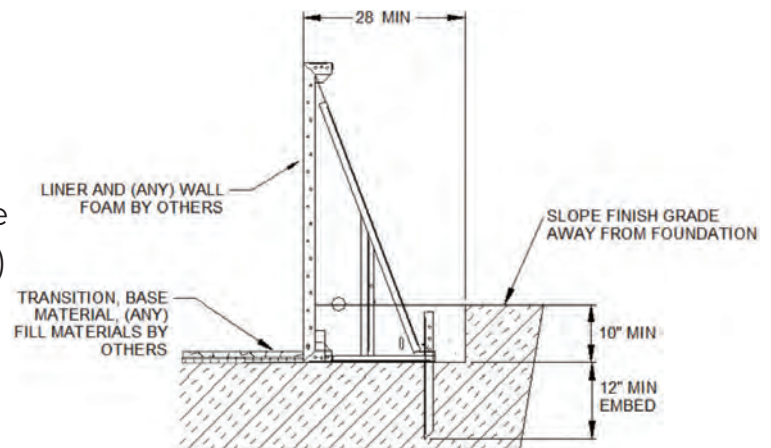
USE THIS SAME PROCEDURE FOR RECTANGULAR POOLS

After all of the panels are installed and checked to be level and square, tighten all the bolts.

6. POURING COLLAR

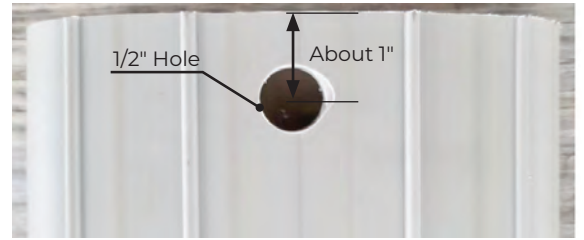
After all the panels are installed and checked to be level and square tighten all the bolts. The collar can be poured at this time. It will be 28" wide (minimum) and 10" deep (minimum) with rebar.

Partial Hillside Install: For pools installed partially into a slope or hillside, ensure the open side footing is poured even with the outside grade.



7. TOP CAP INSTALLATION

A. To install the top cap, drill $\frac{1}{2}$ " holes in the top center of the top cap.



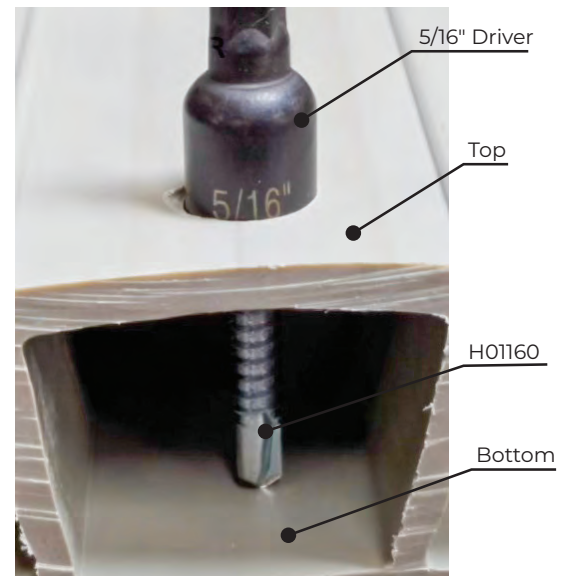
DO NOT DRILL ALL THE WAY THROUGH THE TOP CAP.

B. The holes will need to be about 1" from the end of the top cap and about 12" apart. This distance can vary depending on the panels.

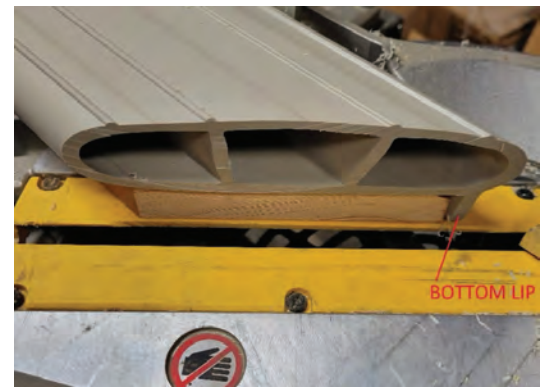
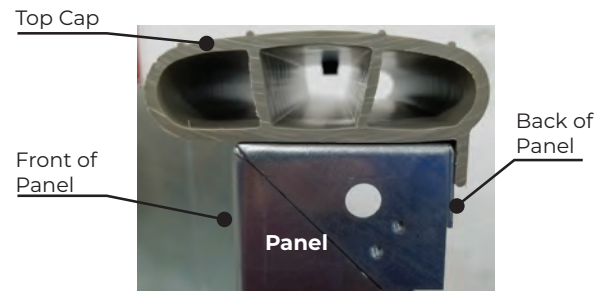
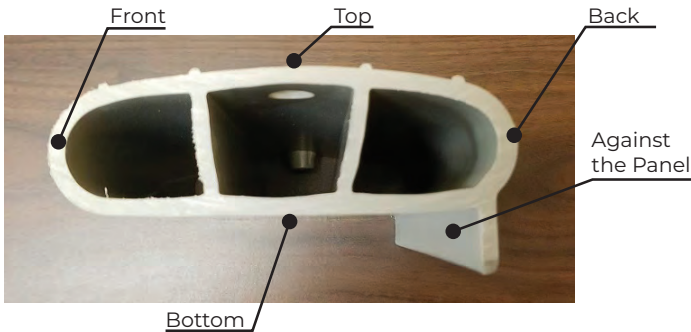
C. The radius panels have slots cut in the top and bottom and the holes could be over one of these slots. If the hole is over a slot then move the hole to the right or left of the slot.



D. Use H01160 self-tapping screws to attach the top cap to the panels.



E. The bottom lip of the top cap will be placed against the back of the panel.



F. Use a mitre saw to cut the corners on the top cap (benches, steps, etc.). Set the angle on the mitre saw for desired corner.

G. Using a scrap piece of wood for bracing, position the top cap so the bottom lip is resting against the guide. Verify the desired angle before cutting.

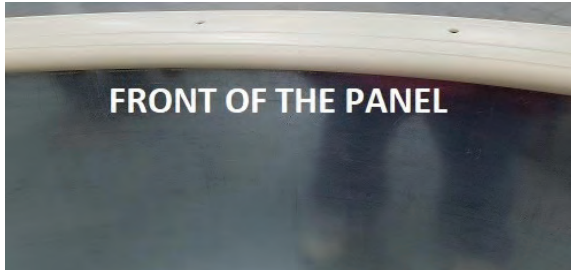
Example: 90° corner = 45° mitre cut, 45° corner = 22.5° mitre cut.

H. Adjust mitre saw angle to cut joining top cap.

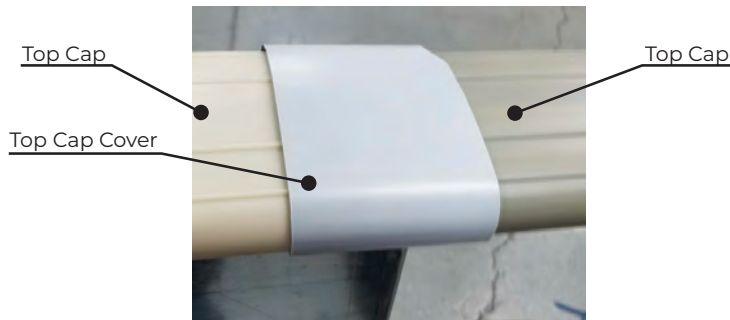
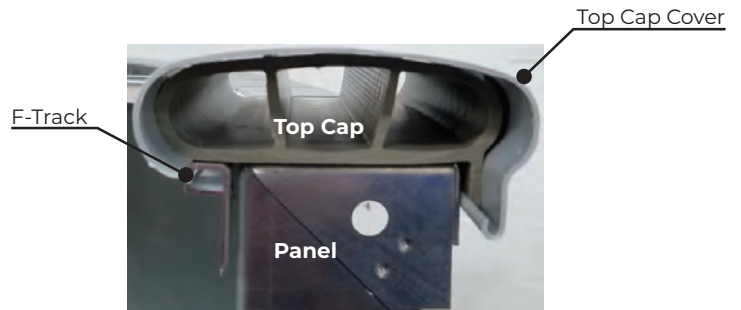
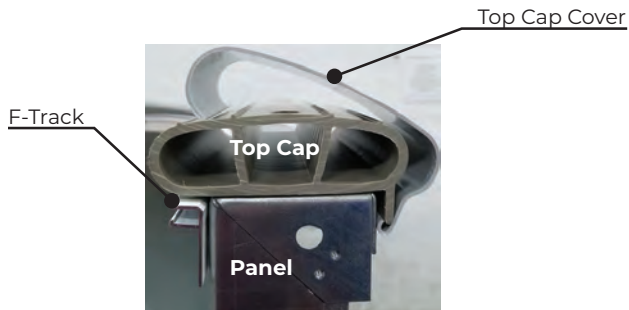
I. For radius pools, the installer will have to form the top cap to fit the radius. Continue this process for the entire perimeter of the pool.



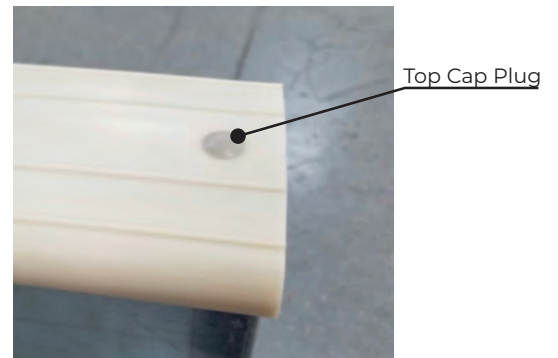
J. For radius pools, the installer will have to form the top cap to fit the radius. Continue this process for the entire perimeter of the pool.



K. Use the top cap covers to cover the joints that are in the top caps. Double-sided tape can be used to hold the covers in place.



L. Install the hole plugs in the holes that were drilled.



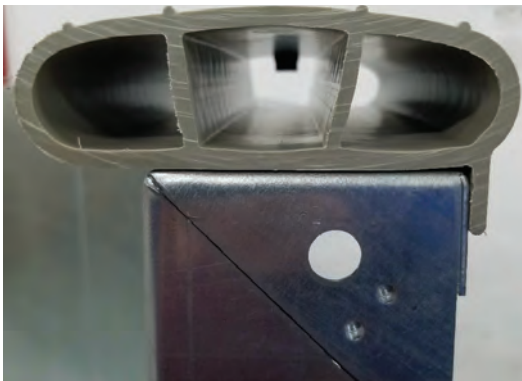
M. Install the F-track up against the top cap on the inside of the panels. Use **H01160** self-tapping screws.



N. Install the **H01160** self-tapping screws above the die line, as straight and as close to the bottom ledge as possible. When complete, tape off the screw heads to help prevent the liner from being damaged.



There are 2 types of top cap, **standard (closed)** and **deck top cap (open)**.



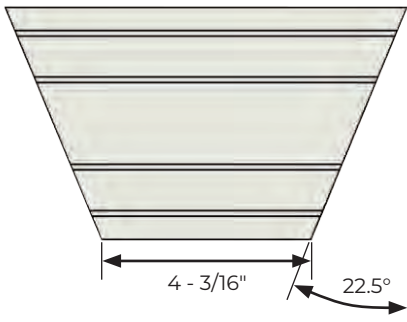
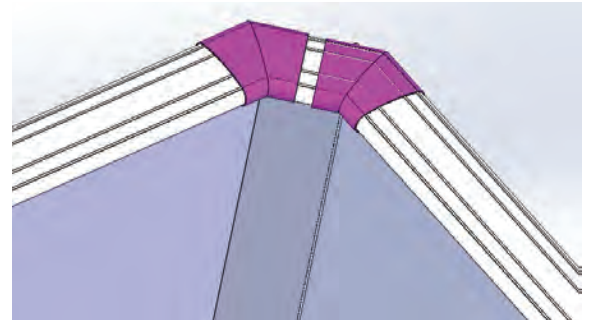
Standard Top Cap



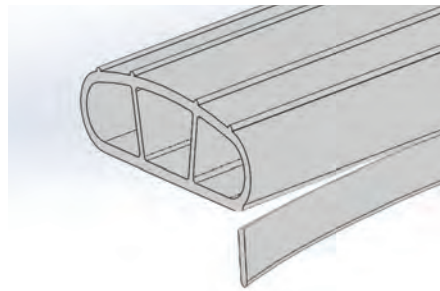
Deck Top Cap

These can be mixed if the deck is not going all the way around the pool. Use the standard top cap cover over the joint.

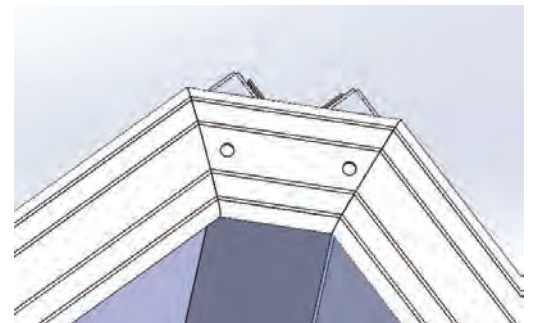
7. TOP CAP INSTALLATION FOR 850 SERIES WALL WITH 6 INCH RADIUS CORNERS



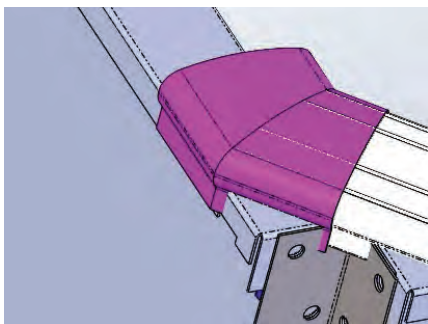
A. Cut the corner filler as shown.



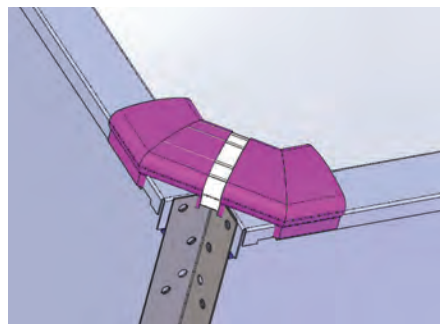
B. Trim the bottom flange of the corner filler as shown.



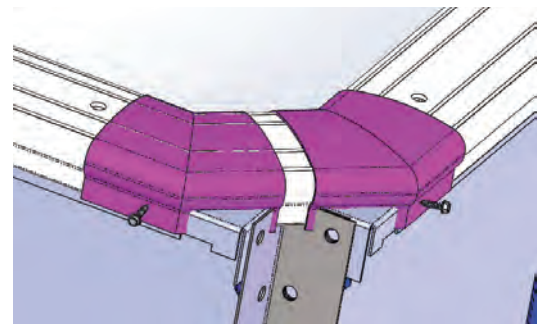
C. Place the parts in location and drill two holes in the corner filler and screw it down to the top of the panels. Make sure you are centered on the panels.



D. Notch the coping clips to clear panels.



E. Slide the coping clips over the corner filler.

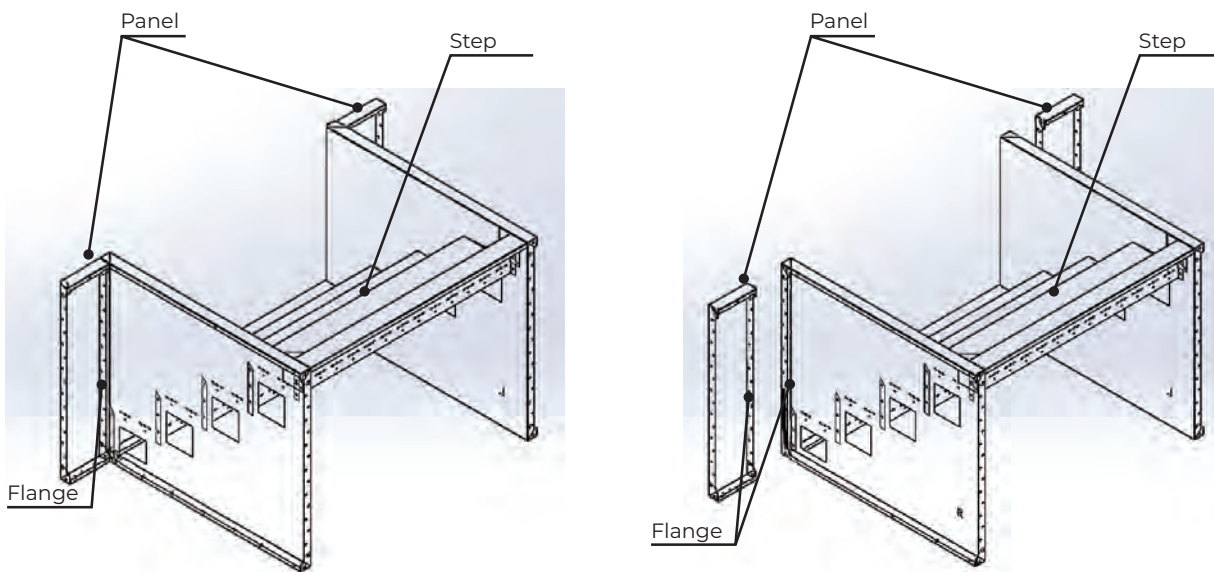


F. Insert screws through the back flange of the clip on both sides.
Not required on open back style coping.

E STEP INSTALLATION INSTRUCTIONS

1. STEEL STEP INSTALLATION

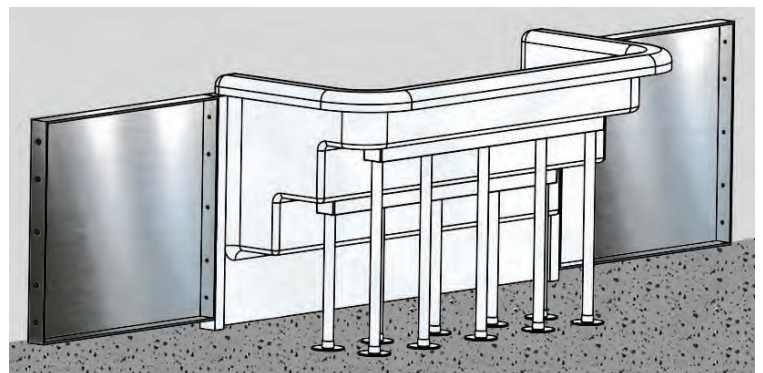
- A. After the step is assembled, move it to the desired location for the pool. Start with bolting the panels on either side of the step loosely. The panels bolt to the side of the step, not the front.



- B. Continue to bolt the rest of the panels and braces together, loosely, for the pool. Use a carpenter's level and cross measurements to square and level the panels. After the pool is assembled and is square and level tighten all bolts.

1. POLYMER STEP INSTALLATION

- A. Place the step in the appropriate location in the pool installation.



B. Cut leveling supports to proper length as needed for the step. Additional leveling columns must be cut and placed under the step for each support socket. (2" Schedule 40 PVC)

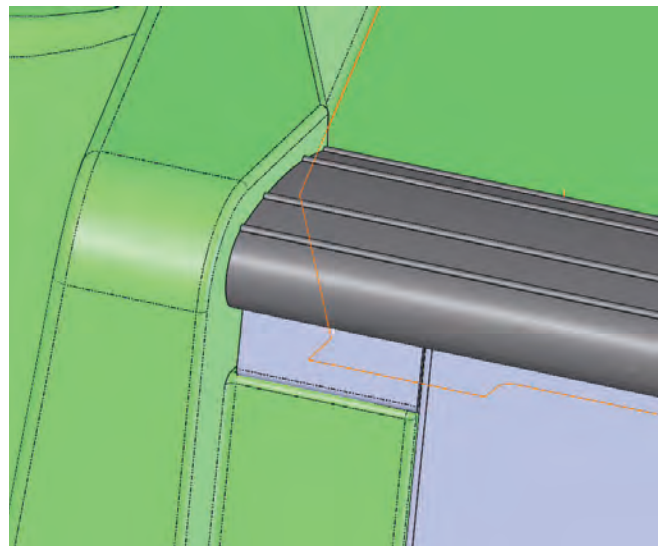
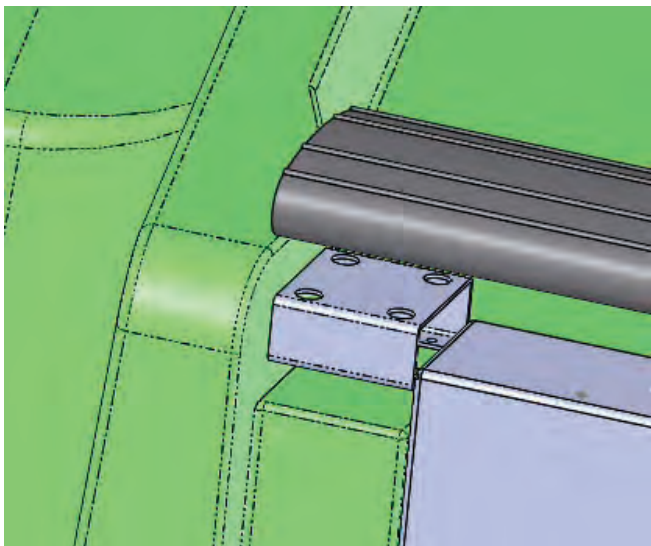
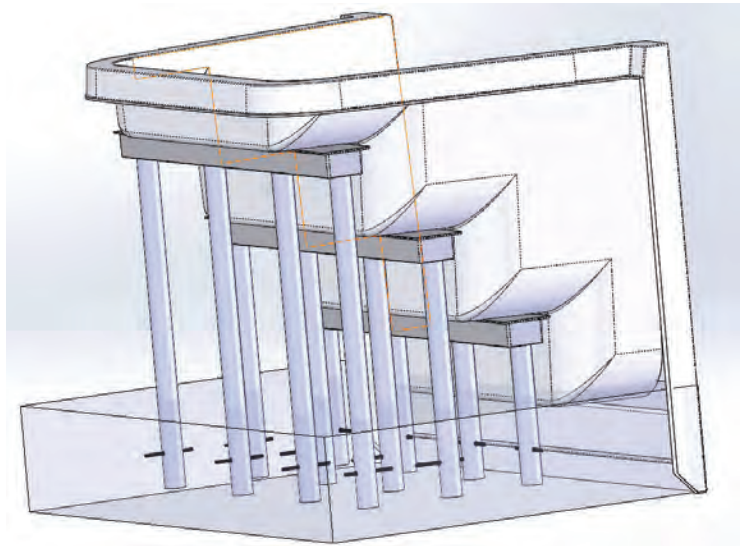
C. All of the supplied 2" PVC pipes must be glued into the sockets of the step supports. All available sockets should have a pipe inserted. Use a glue formulated for PVC to ABS such as Oatey All Purpose. Nine pcs 48" are supplied.

Cut four pcs 40 3/8" for top tread. Cut four 29 1/2" for the middle support. The 18 1/2" leftover fits the lower support.

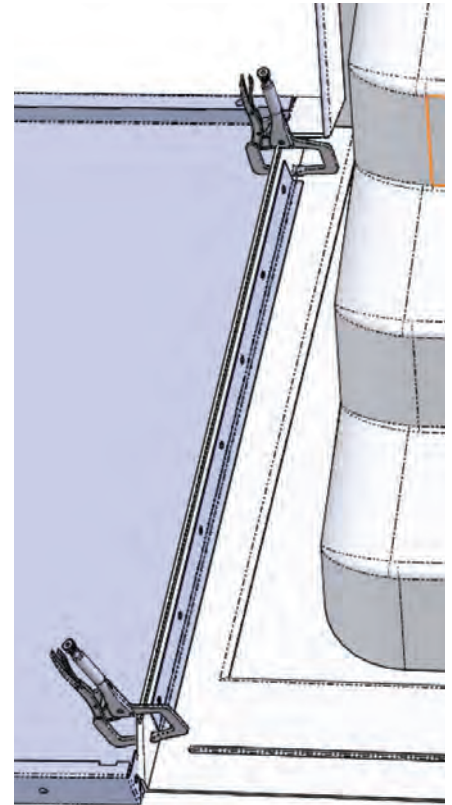
D. Gently tap the leveling columns until they are fully seated in the sockets provided on the step support.

E. Properly level the step. (Using a carpenter's level can assist in this process)

F. If using the flexible polymer top cap use H043396 (00043396) spacer between the top of wall ledge of the step and line wall up with the top of spacer to set height. Attach spacer to step with tek screws. Top cap and F-track can then be attached to the spacer.



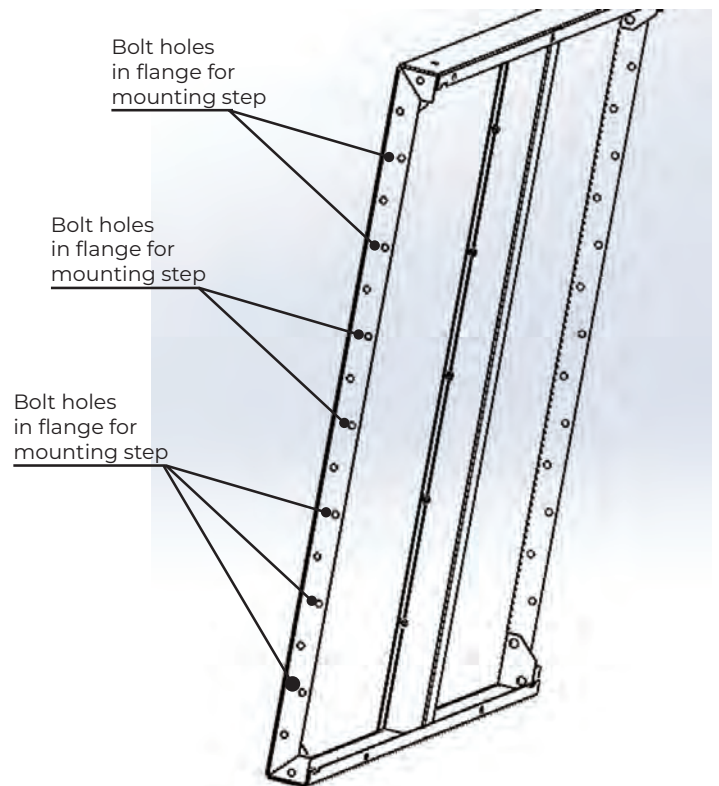
H. Clamp the step securely to the wall, ensuring the clamps do not block the mounting holes. Use the **back row of holes** in the panel flange as a guide to drill through the step flange. Position the **bolster (HPSD49629)** inside the step flange against the backside of the step front. Insert the brace bolts through the aligned holes and tighten. Only the **back row of holes** on the brace will be used for bolting.



G. When mounting step to wall panel use the back row of holes. Once step is located and clamped in place drill 3/8" holes through the back row of holes. Place bolt through step flange then wall flange then brace and install nut and tighten.

There should be a brace on either side of the step. It should go to the outside of the joint.

If using polymer top cap coping the joints will use straight clips to cover joints and will snap over coping. If the pool has angled joints and angled clips the coping must be cut to fit the angle and inserted into the clip before it is attached to the top of the wall.



F SKIMMER INSTALLATION INSTRUCTIONS

A. Use manufactures installation instructions to install all skimmers.

Aqua Genie



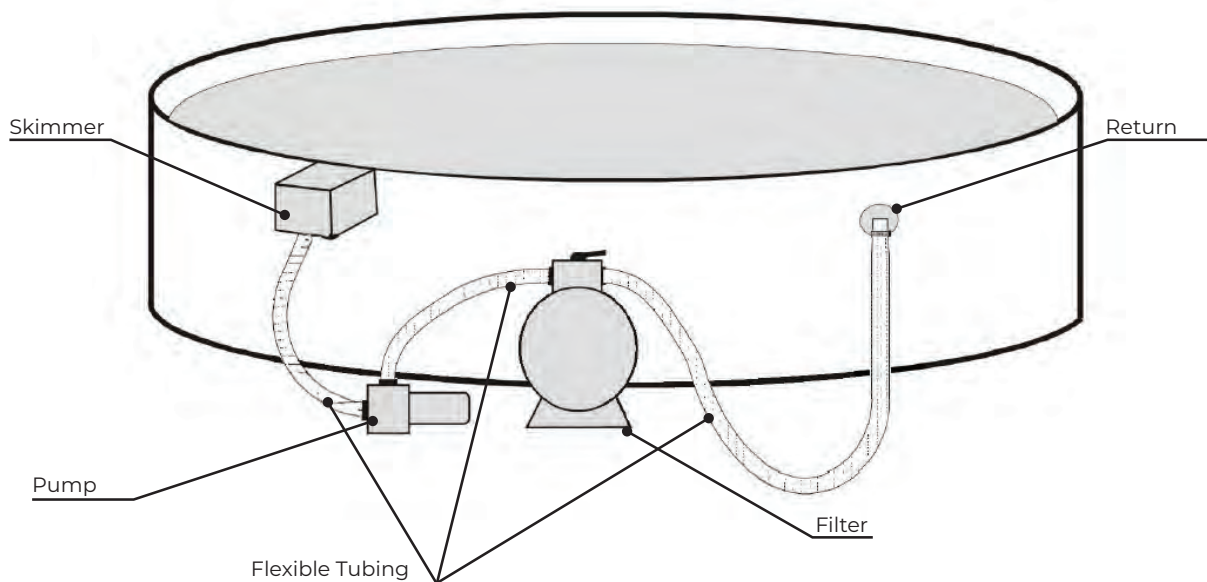
For Support Leg

1084 Skimmer



For Support Leg

B. Flexible tubing can be used to plumb the skimmer, pump, filter, and return/inlet.



MAKE YOUR BACKYARD COMPLETE WITH HYDRA POOLS

You've chosen the strength and reliability of a Samson Pool Kit. Now take your backyard to the next level. Hydra offers everything you need to customize your pool for comfort, style and safety.

VINYL LINERS

Your liner is what brings your pool to life. Hydra liners are built to fit perfectly and look incredible for years. Choose from dozens of patterns, colors, and textures to match your style and make your pool truly yours.

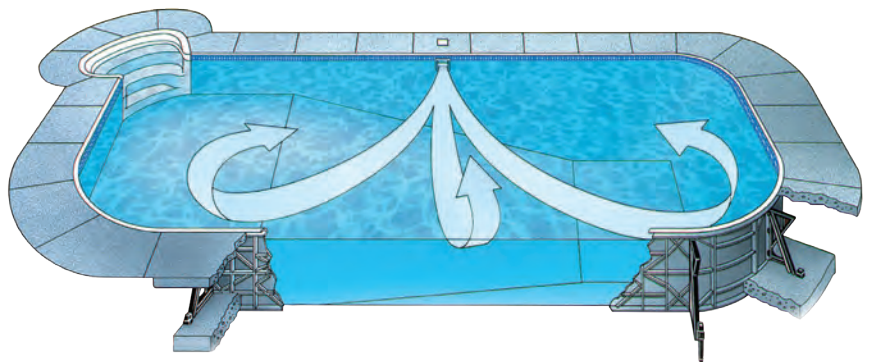


SAFETY COVERS

A Hydra safety cover gives you confidence when the pool isn't in use. Each one is custom-made to fit your exact pool shape, keeping it clean and secure through every season. It's the easiest way to protect your investment and your family.

AQUA GENIE® SKIMMER SYSTEM

The Aqua Genie keeps your water fresh and clear with smart circulation and easy maintenance. It skims and cleans efficiently so you can spend more time enjoying your pool instead of working on it.



LINER CARE ESSENTIALS

Your Hydra liner is built to last with the right care. Keep these basics in mind to protect its beauty and performance for years to come.

WATER BALANCE

Test weekly. Keep levels in these ranges for the best liner protection:

Parameter	Ideal Range
Free Chlorine	2–4 ppm
pH	7.4–7.6
Total Alkalinity	80–100 ppm
Calcium Hardness	200–400 ppm
Cyanuric Acid (Stabilizer)	30–50 ppm

If you use a salt chlorinator, monitor it closely. High chlorine or salt buildup can cause fading or corrosion.

CHEMICAL USE

- Read and follow product labels carefully.
- Add one chemical at a time, fully dissolved in a bucket of water before adding it to the pool.
- Always add chemical to water, not the other way around.
- Never put chlorine tablets or sticks directly in the skimmer or broadcast dry chlorine, it can bleach the liner

CLEANING & UPKEEP

- Use a vinyl-safe vacuum and brush. Avoid stiff bristles or sharp edges.
- Clean the waterline gently with a soft cloth or non-abrasive cleaner.
- Don't drain your pool completely without professional guidance, it can damage the liner.

WINTER & SEASONAL CARE

- Balance the water before closing.
- Super-chlorinate, circulate and clean the pool before lowering water to closing level.
- Drain and plug lines, remove chlorine from feeders and install a Hydra safety cover for protection.



BUILT TO LAST. DESIGNED FOR LIVING.

Every Hydra pool is made to bring lasting enjoyment, easy care and timeless style to your backyard. From liners and safety covers to complete pool kits, we're here to help you make the most of your outdoor space.



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