

hydrosphere SERIES

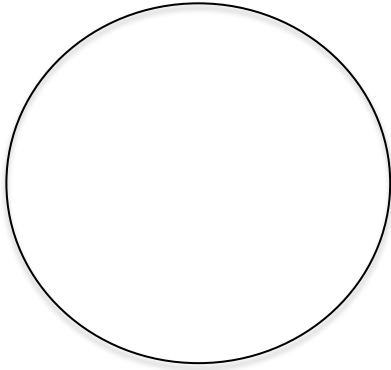
Semi-Inground Pool by Doughboy



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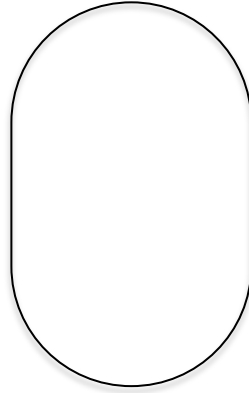
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POOL SHAPES AND SIZES



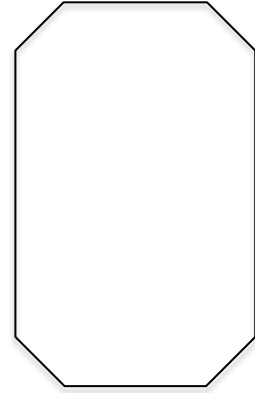
Round

15'
18'
21'
24'
28'



Oval

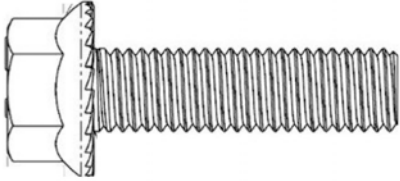
12' x 24'
15' x 30'
18' x 33'



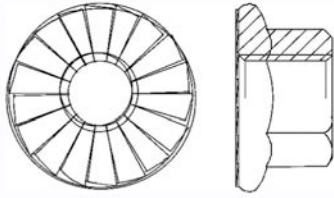
Grecian

12' x 24'
14' x 28'
16' x 32'
18' x 36'

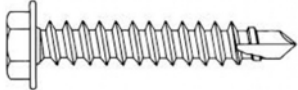
*** See Spec Book for Details**
Hardware List



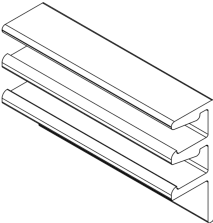
#1. 3/8" Serrated Hex Flange Bolt – Zinc
Used for bolting wall panels together



#2. 3/8" Serrated Hex Flange Nut – Zinc
Used for bolting wall panels together



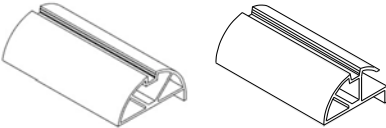
#3. 1" Hex Flange Tek Screw – Zinc
Used for Installation of F Track and Top Rail



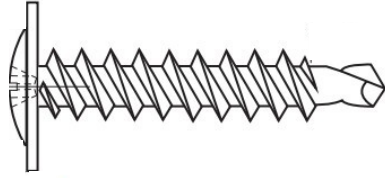
#4. 8' Stick Aluminum F Track Bead Receiver
Used to Hold Liner Bead at Top of Panel



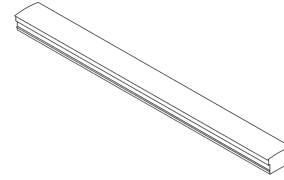
#5. Buttress Brace
For Use on Pools w/ Straight walls



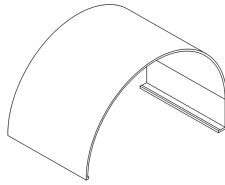
#6. Top Rail (Standard or Deck Mount) – Optional
Used on Top of Walls to Provide Finished Look



#7. 3/4" Wafer Head Self Tapping Screw
Used to Attach the Optional Skirting Panels/
Securing Brace Covers



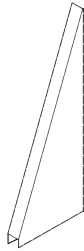
#8. Top Rail Insert
Used as Beauty Piece to Conceal Top Cap
Screws



#9. Top Rail Clip
Used as Beauty Piece to Conceal Top Rail Joints



#10. Safety Signage – Mandatory
Clips on to Top Rail



#11. Brace Cover
Used to Conceal Buttress Braces to Provide
Finished Look



#12. Radius Wall Panels
Used in Round and Oval Pools to Create the
Rounded Edges of the Pool

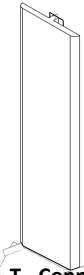


#13. Straight Wall Panels
Used in Grecian and Oval Pools to Create the
Straight Edges of the Pool

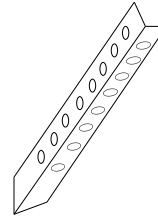


#14. 4' x 6' Skirting Panels - Optional
Used on the Outer Perimeter of the Pool to
Provide Finished Look

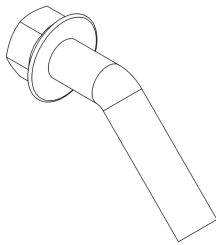
Note for #14: Must use Doughboy's Hard Plumb Kit (Prod#1115-0752/Dealer Cost of \$18.00) when using the Semi Onground - Hydrosphere Skirting Panels or Insulation Kit.



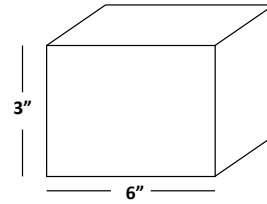
#15. T - Connector
Used for concealing joints in skirting panels



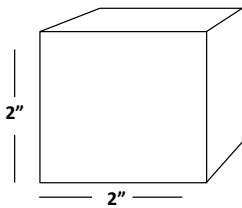
#16. V Stake – Used for Panels and Brace



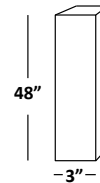
#17. 3/8" Bent Serrated Hex Flange Bolt – Zinc
Used for bolting 45-Degree corners of Grecian shape pools



#18. 3"x6" Foam Block
Used for attaching skirting material to pool walls



#19. 2"x2" Foam Block
Used for supporting skirting material against buttress brace



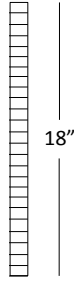
#20. 3"x48" Foam Block
Used for supporting skirting material against wall panels



#21. 45 Deg Corner – Used Only on Grecian Shaped Pools



#22. Funmastic Adhesive – Used to Install Top Rail Insert



#23. 3/8" x 18" Rebar – Used to stake the pool down

On Ground Installation Manual

Disclaimer: This Installation Booklet is to be used ONLY as a basic guide, and for information on the installation of an on-ground, steel wall, vinyl liner swimming pool. There are multiple construction methods and techniques that can be used in the construction of an on-ground swimming pool. In addition, the construction of an on-ground swimming pool must comply with all local, state, and national codes. Before construction begins, you must verify all applicable building permits. Due to the various contingencies, and issues that can arise in the construction process, it is highly recommended that a local swimming pool professional install all swimming pools. **It is highly recommended that all Residential Swimming pools be constructed without a diving board and, or slide; and users of the swimming pool be required to only enter a pool “feet first” and “heads up”.** ALL SAFETY SIGNAGE that is provided with the components and products from manufactures must be installed in accordance with the instructions provided by each manufacturer.

In addition to the information in this booklet, the internet is another good source for further information regarding the construction of swimming pools, swimming pool

safety, swimming pool products, installation techniques, problems and solutions. You should also review the following web sites www.poolsafely.gov and www.apsp.org, for additional information.

The following safety equipment should be available:

- * First aid kit.
- * Reach pole one piece with hook - not less than 12' long.
- * A 1/4" diameter throwing rope 1-1/2 times the maximum width of the pool or 50' which-ever is less, to which has been attached a ring buoy with an outside diameter of approximately 15 inches, or some similar floatation device.

General Information

Planning Stage: (there are several things that should be considered).

- Easements and subdivision restrictions.
- Building codes- these will provide you with the easements, lot line setbacks, and general requirements for the positioning of the pool, including the size and shape that will best fit your yard. Also your local code enforcement may be able to locate obstructions in your yard.
- Contact your local utilities companies in reference to underground utilities. (Communication, gas, electric, etc.)
- Obtain permits, and fencing requirements that may be needed.
- Contact any professionals that may be needed. (Gas, electrical, etc.)
- Make sure that any machinery required for the construction process can gain access to your pool site. Do not assume that your neighbors will let said machinery cross onto their property.
- In choosing your pool's location it is best to keep it close to the room of your house that you will most likely use to gain access to the pool area. (Doing this will keep restrooms, food, and drinks nearby when they are needed).

- Try to position the pool in a clear area with as few trees as possible. (This will reduce the amount of debris falling in the pool, which, in turn will result in less cleaning time spent and more relaxing and enjoyment of the overall pool experience). (Avoiding trees will also allow swimmers to better enjoy the afternoon summer sun).
- The sun plays an important factor for the pool as well. (Full exposure to sunlight helps to increase the water temperature).
- Keep drainage in mind. (After a summer downpour you will want the rainwater to run away from your pool, but to a place that is not going to upset you or your neighbors).
- Many Pool filters need to be backwashed. Doing this purges the filter of dirt and debris, along with a decent amount of water. (You will want that water to flow to a place that won't cause a problem for you or your neighbors). (There may be an ordinance in your area against running backwash water into the municipal drains/storm drains. Should that be the case you may want to consider using a cartridge filter, which doesn't require backwashing).
- If you have a neighbor that has a pool, it would be a good idea to check with them to see if there was anything that they had to overcome during the construction process of their pool. (Rock, laws and codes, Etc.) These issues may not necessarily prevent the installation of a pool but there may be additional cost involved in the construction process.

Tools Needed:

- **Marking spray paint-** for layout.
- **Wrenches-** for use during assembly of the wall system.
- **Socket set-** for assembly of wall system.
- **Screwdriver-** flat and Philips heads, for use in assembly of steps if applicable, and plumbing fittings.
- **Tape Measures-** three needed, a 25' and 2 - 100's Used for layout, squaring the pool etc.
- **Utility knife-** used to cut liner during assembly of plumbing fittings and steps.
- **Drill with a variety of bits-** used to attach coping.
- **Wheelbarrow-** used to move dirt.
- **Shovels-** flat and spade, trending, shaping etc.
- **Rakes-** used for shaping the pool interior.
- **Transit-** for layout, excavation and leveling of the pool (rental).
- **Pick Axe-** for shaping the dig. (If Needed)
- **Hammers-** sledge and standard, for driving stakes.
- **Tamper-** used to smooth the bottom material.
- **Hacksaw (with metal blade) -** used to cut PVC pipe and aluminum coping.
- **Carpenter square-** for layout.

- **Large channel locks**- for tightening of plumbing fittings.
- **Level**- 4' long for checking step level and set up.
- **Shop vacuum**- for cleaning and seating liner (may need two).
- **Broom**- for cleaning and seating liner.
- **Garden hose**- for the fill.
- **“C” clamps**- large ones for step set up if applicable (can use welder’s clamps).
- **Duct Tape**- good quality for panel joints.
- **Wood**- assorted 2x4, stakes for set up and pool layout.
- **3/8” x 18” rebar stakes**- for staking the pools walls prior to pouring the concrete collar.
- **5/8” Nut driver bit**- used for driving self-tapping screws into the coping.
- **PVC glue and primer**- for gluing plumbing fittings.

Excavation Equipment: Pool must be in the ground a minimum of 2’

- Excavator or Backhoe- Recommend an experienced excavator operator
- Bobcat (If deemed necessary)
- Dump truck (If deemed necessary)

Special Note – The selection and preparation of the pool site is your responsibility. The manufacturer can only suggest the proper techniques, indicate the important considerations and emphasize the precautions and cannot be held responsible for damages to your pool that may result from failure to carefully follow all pool specifications.

(Step 1) Choosing the Best Location for Your Pool:

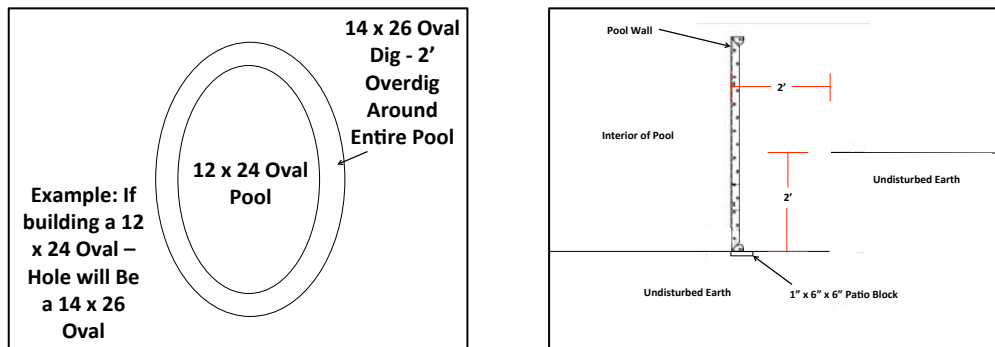


- The surface on which your pool will stand must be level and solid. The best surface to build on is bare, solid, and free from stones, or any other sharp objects that could puncture the liner.
- The site must be accessible to electrical and water supply and should allow for the disposal of large quantities of water should the pool ever need drained. In addition to that all electrical outlets within 10' of the pool must be GFI protected
- Careful considerations must be taken when deciding where to install your pool.
- Do not set you pool up on hilly areas, or any areas with poor drainage. The install site must have an efficient drainage system to accommodate periods of heavy rain and high ground water.
- You will also want to remove any stones, sticks, roots, and any other objects that might damage the liner. Being that soil conditions vary from location to location it is recommended that a 2"-3" layer of clean, washed, masonry sand be put down as a base for your pool floor.
- Do not set the pool up on or near any septic system or underground utilities. This will prevent the need to drain and disassemble your pool should the utilities or septic system need repaired down the road.

(Step 2) Preparing the Pool Site: (Recommended tools – Backhoe, shovel, rake, laser transit, wheel barrow)



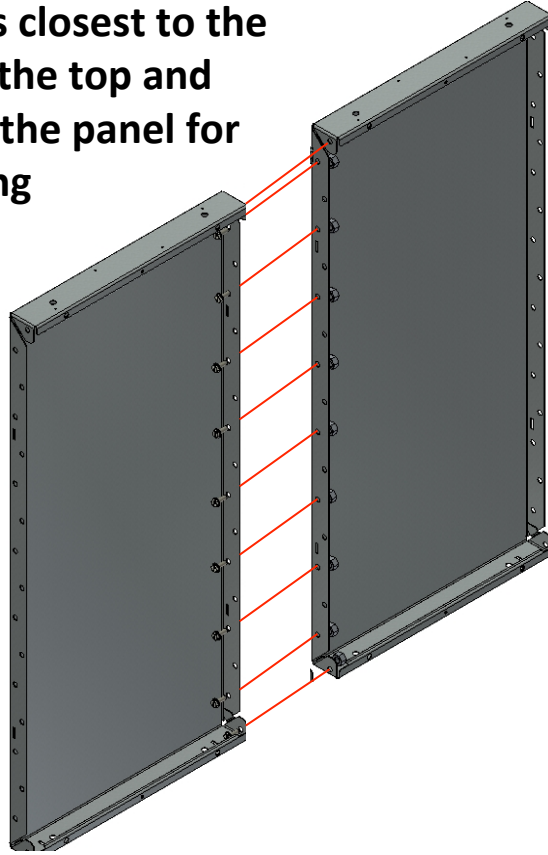
- Once the location has been determined following all the specifications listed above, it is time to start preparing the selected area for the installation. Using a 100' tape measure and marking paint, begin laying out the pool with the provided measurements on the drawing plus 24". Having that extra 24" around the pool will allow for ease of installation and allow adequate room to work. (See Diagram Below)



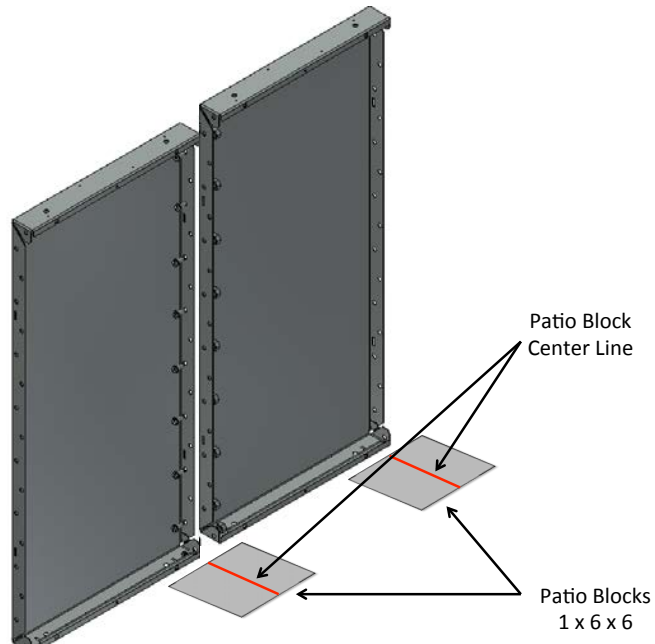
- Once the shape of the pool is marked on the ground the entire area will **need to be dug down a minimum of 2'**. The pool location must be 100% level. For this you will want to use a laser transit. Typically the ground will need some amount of leveling and rather than trying to raise any area, it is best to find the lowest point and then match the rest of the area to that level. Never add dirt to low areas. This would allow those areas to settle leaving low areas under the liner once the pool is filled.
- To give the pool walls the best possible base to sit on it is recommended that a layer of compacted stone dust be put down and leveled. Patio blocks can then be placed around the perimeter of the pool where each panel joint will be. The patio blocks should be 1 x 6 x 6 and 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.

(Step 3) Panel Installation / Buttress Brace Installation: (Only utilize holes closet to the face as well as the top and bottom holes of the panel for bolting. Using every hole will require extra nuts and bolts - Not provided). This step requires part # 1, #2, and #12 (And #13 on pools with straight walls)(and #21 if installing a Grecian shaped pool) from the Hardware List page. **If installing a fiberglass step please see pages 46-47.**

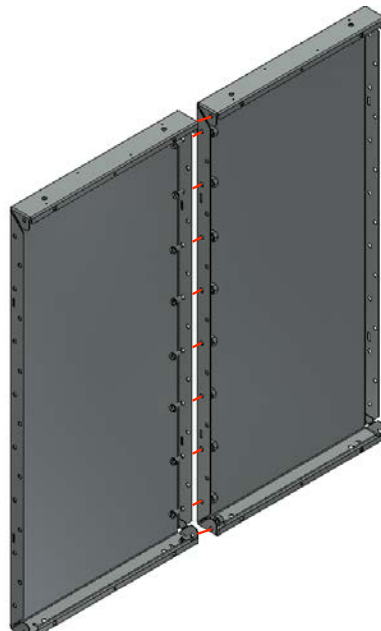
Only use the holes closest to the face as well as the top and bottom holes of the panel for bolting



- To begin the wall panel installation, first locate the wall panel with the skimmer/inlet cut out. This panel should be placed adjacent to the electrical supply and allow ease of access once the pool is installed.
- The wall panel should be placed on the blocks so that each end of the panel falls in line with the center of each patio block. From there you will set the next panel in place following the wall panel layout on the drawing. (See Image Below)



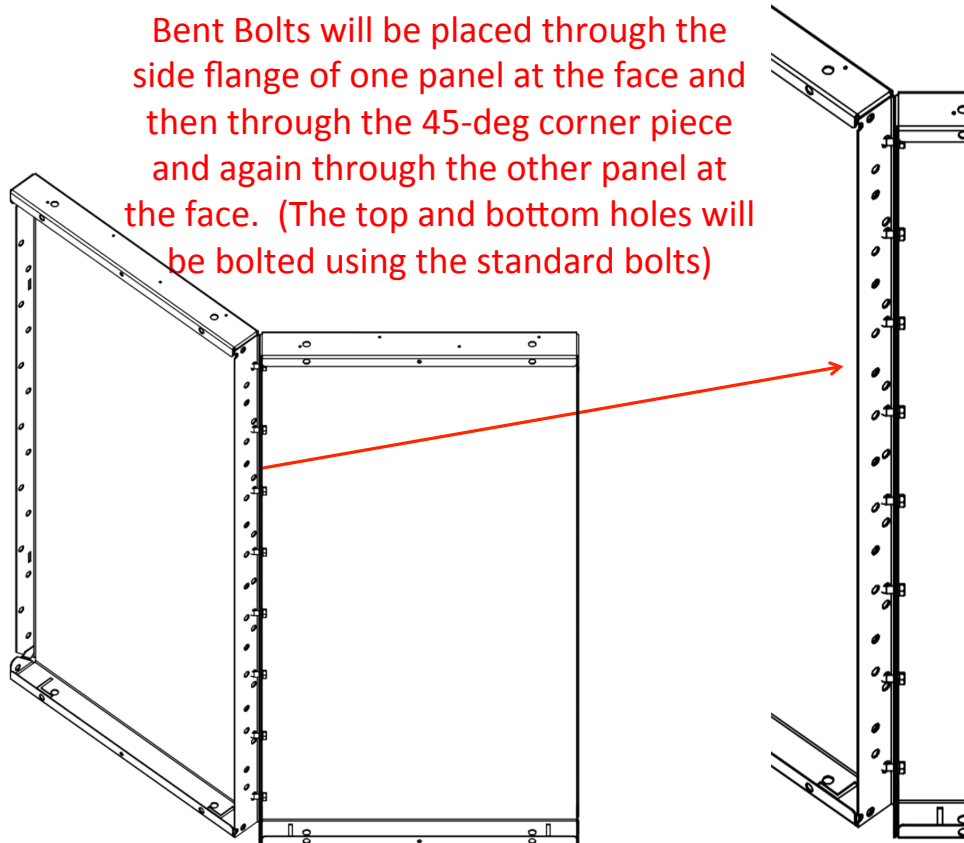
- Every wall panel that gets set should fall in line with the centers of each patio block all the way around the pool.
- To connect the wall panels together you will need a 9/16" socket/ratchet, a 9/16" open ended wrench, and the supplied bolts (#1) and nuts (#2). When bolting the panels together you will utilize **the holes closest to the face of the panel as well as the top and bottom holes in the side flanges of the panels.** (See Image Below)



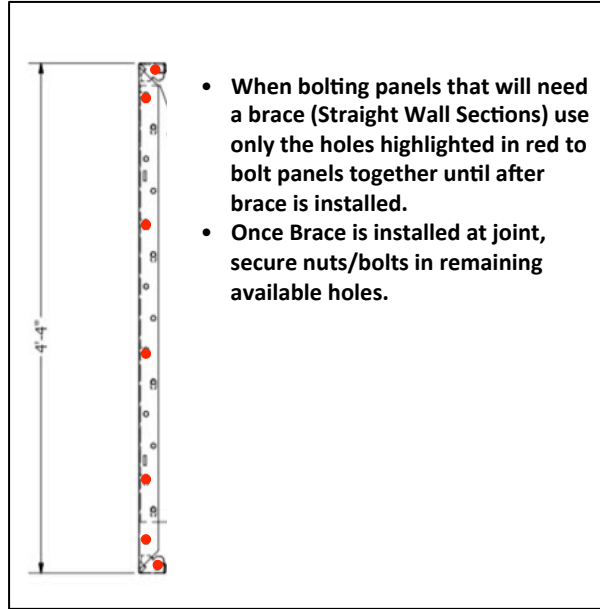
- Keep in mind that the holes in the panels are slightly larger than the diameter of the bolts that goes through them. This will allow the panels to slightly move back and forth. You will want to ensure that the face (inside the pool) and top edge of the

panels are flush before tightening the bolts. You will work your way around the pool in this fashion.

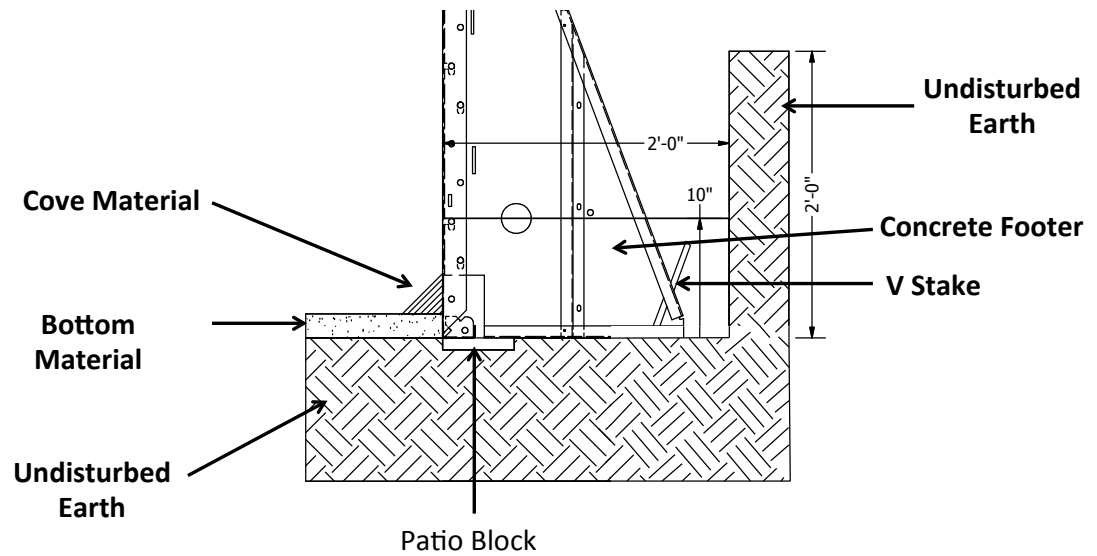
- If installing a Grecian shaped pool you will need to use the supplied “bent” bolts (#17) and the supplied 45-degree corner pieces (#22) to bolt the corner panels together. The bent bolts will be used only in the holes closest to the face of the panels. The top and bottom holes will be bolted using the standard bolts. Again every hole at the face of the panel as well as the top and bottom holes must be used. (See image below)



- If installing an Oval or Grecian shaped pool you will need to install the provided buttress braces. These braces will be installed at the panel joints along the straight walls of the pool.
- The buttress brace will limit the amount of available holes.
- To prevent yourself from needing to remove some nuts and bolts completely from the panel joints when it comes time to install the braces, initially bolt the panels that will get a brace together using only the holes that coincide with the slotted holes on the brace. (See Below)



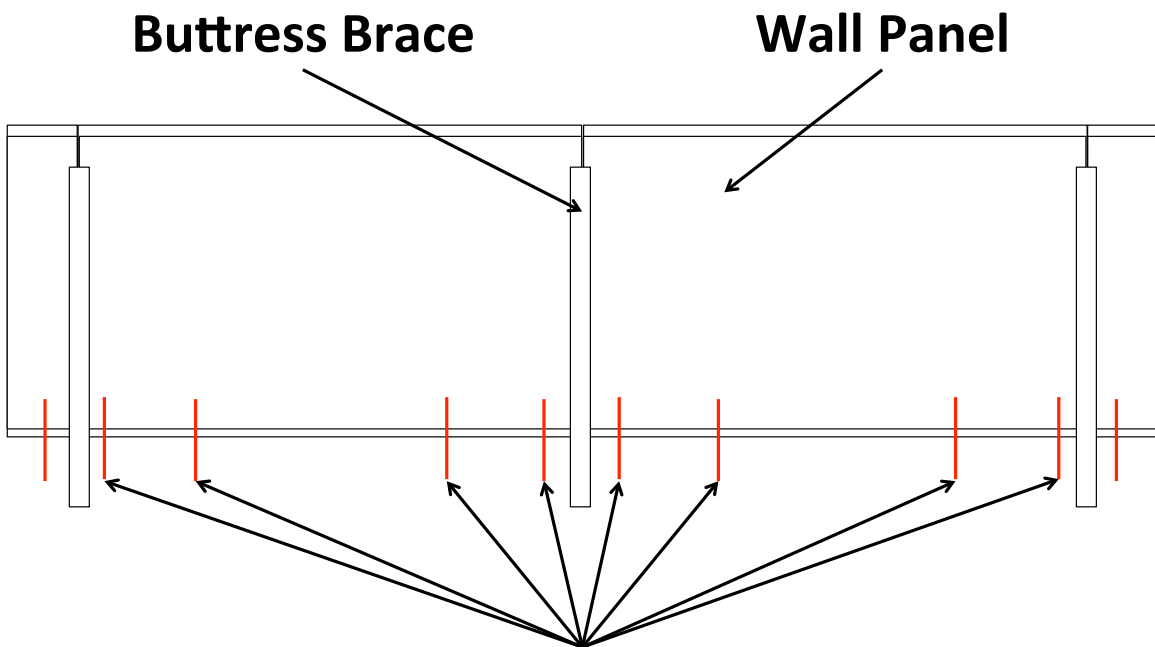
* The braces will also need to be staked to the ground using the provided "V stakes" (#16), however you will want to make sure that the pool is squared prior to staking the braces. (See Image Below)



- Loosen the bolts holding the panels together just enough to slide the brace into place. (See Image Below)



- Once the brace is in place simply tighten the nuts and bolts securing the brace to the wall panels. (When tightening the nuts and bolts make sure that the face of the panels (inside the pool) are flush.)
- Place a bolt and nut in the remaining available holes and tighten.
- Once all of the panels are in place and bolted together you will want to make sure that all of the provided dimensions have been met. You may need to make some adjustments to the walls so that every dimension is met.
- When you are satisfied with the pool layout you can begin staking the pool down. This will help the pool to hold its shape. For this you will need a small sledgehammer (2-4 lb.), the provided 3/8" rebar stakes (#23), and on pools with straight walls and braces, the supplied V stakes (#16). You will want a stake in every available hole along the bottom flanges of the pool panels. (See image below)



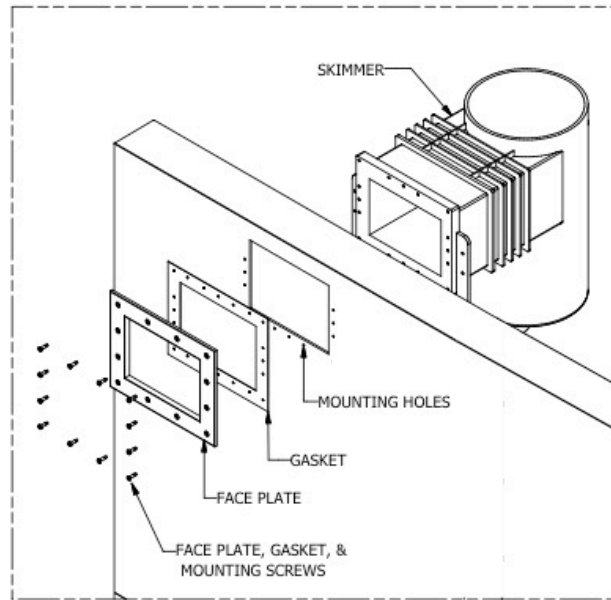
Use #23 rebar stake to secure the pool to the ground through every available hole.

- Once the pool is staked down you will want to make sure that it is still level all the way around. To do this you will again use the laser transit. If you find that there are some points that are not level, you will want to find the highest point of the pool and raise the rest of the pool to that level. To do this you will have to slightly lift the walls and use shingles as shims to raise the walls. Simply stack the appropriate amount of shingles on top of the patio blocks under the wall.

(Step 4) Installing the Skimmer and Returns: (Recommended Tools – Screwdrivers (Phillips and Flat),

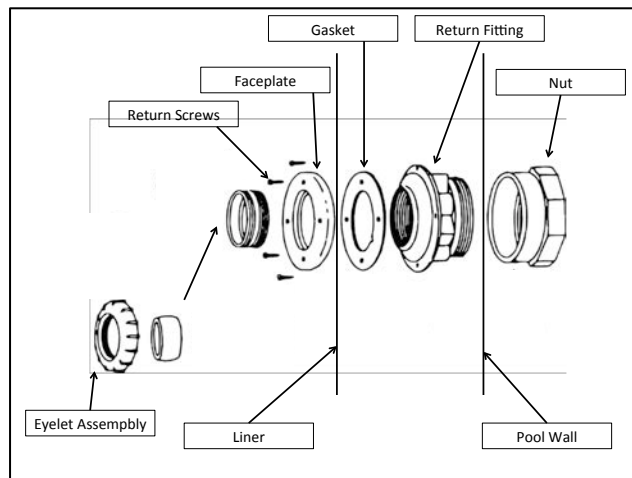
Once the pool is staked and level you are ready to install the skimmer and return per manufacturers recommendations. (See installation instructions included with skimmer)

***Please note that the skimmer and return will be installed on the same panel.**



NOTES:

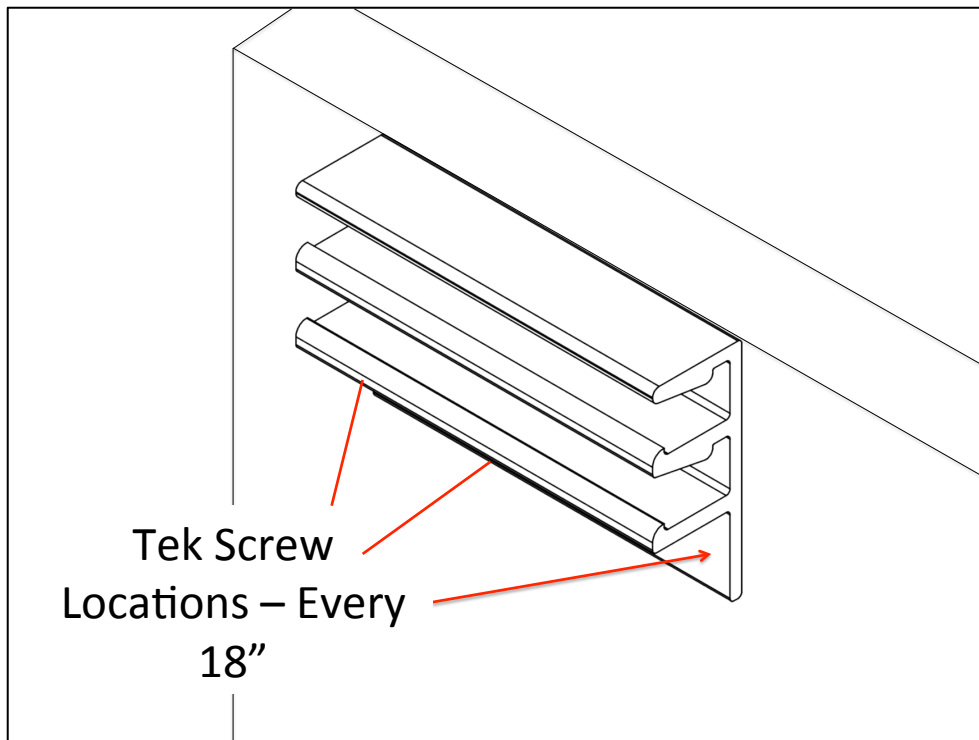
- 1) Install skimmer per manufacturer's instructions.



(Step 5) Installing the F Track Coping: Oval Pools (Recommended Tools - impact driver, 5/16 nut driver, hack saw with metal blade, Tek screws (#3) and the supplied F Track coping (#4))

The coping will come in straight sticks and need to be bent to fit the radii of the pool. You will find that the coping pieces are fairly flexible and will require little effort to bend.

- Begin with a stick of coping starting on either side of the pool where the straight wall section meets the radius.
- Overlap the straight wall section by 4" – 6" and work your way around one radius of the pool securing it to the face of the pool wall, and **flush with the top of the panels** with self tapping screws (Tek screws) every 18 inches (12" on radius Pools). (See Image Below)



- Each piece of F Track will be butted up to the previously installed section creating a continuous perimeter of F Track around the top of the pool walls.
- After completing one radius of the pool, move across the pool and repeat the process on the other radius. When getting to the other side of each radius you may need to cut the coping using a hack saw (removing any rough edges with a file) so that it overlaps the straight walls 4" – 6".
- When the coping is installed on both radii of the pool you can begin installing the coping down the straight walls.
- You will butt the coping up against the radius that is already installed at this point and work your way down the straight wall securing the coping to the panels with self tapping screws (Tek screws) every 18" or so like you did with the radius portions of

the pool. Again you may need to cut the last piece of coping to fit (removing any rough edges with a file). Once complete you will repeat this process on the other straight wall of the pool.

Installing the F Track Coping: Round Pools

- All coping pieces will be identical so it is just a matter of choosing a starting location and working your way around the pool securing the coping to the face of the pool wall using the self tapping screws every 18" or so.
- You may need to cut the final piece to fit properly.

Installing the F Track Coping: Grecian Pools

- You will want to start by installing the coping at the Grecian corners of the pool first.
- There are two ways to go about creating the 45-degree corner out of the straight stick of F Track coping. You can either bend the coping around the corner creating more of a 45-degree radius, or you can cut the coping to create a hard 45-degree corner.
- Once the desired approach is determined, you will secure the coping to the face of the panels using self-tapping screws (Tek Screws).
- It is recommended that the corner that is created be in the center of the stick of coping. This will help to reduce the amount of joints in the F Track and make the liner installation somewhat easier.
- When all corners are created and secured to the walls, begin installing the straight lengths of F Track around the pool.
- Starting with full length sticks of F Track, begin at one of the corners that you previously made and work your way around the pool securing the F Track coping to the face of the pool walls using the self-tapping screws every 18 inches or so.
- You may need to cut pieces of F Track to length to fit between the corners and the full-length stick that you have installed.

(Step 6) If using Composite/ Wood Board Top Rail - See Pages 28-29

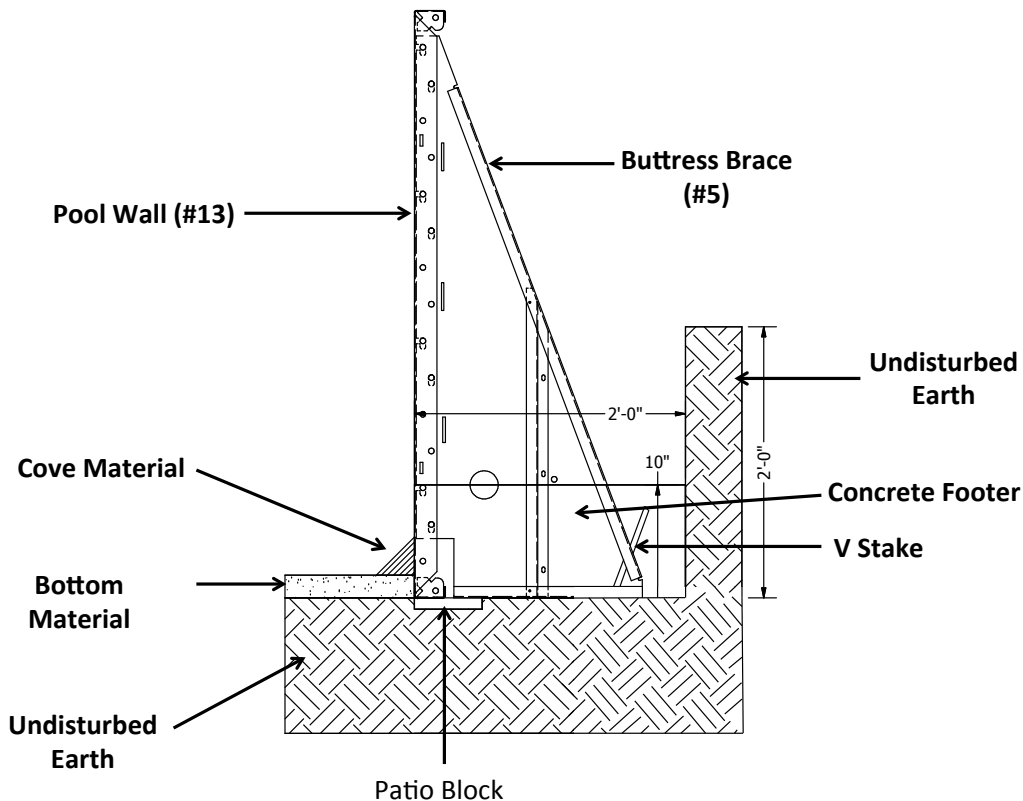
(Step 7) If installing the Light - Installation - See Page 30

(Step 8) Pouring the Concrete Footer:

When the walls are up, straight, and level and all stakes are in place, a concrete footing must be poured around the pool. This will help to secure the pool and prevent movement.

- Pour concrete around the entire outside perimeter of the pool.
- The concrete should be 24" wide and a minimum of 10" deep.

- Use a 3" slump to start but you may need to wet it up to a 4" slump– This relates to the amount of water that is in the mix. A 3" slump is a fairly dry mix, but because there will be no need to trowel the concrete it does not need to be very wet. The reason for needing to add water is due to the fact that because it is such a dry mix it may not come out of the concrete truck very easily.
- Please note that pouring a concrete footing all the way around the pool regardless of the shape will make the structure more permanent.
- If the pool shape requires the use of the Buttress Braces (Grecian or Oval) you will need to ensure that each V stake gets encased in concrete (See image below)



(Step 9) If using Insulation Kit - Insulation Kit Installation - See page 30

(Step 10) If using skirting - Skirting support installation - See Pages 31-34

(Step 11) If using skirting - Panel Installation - See Pages 34-38

(Step 12) If using top Rail - See Pages 39-43

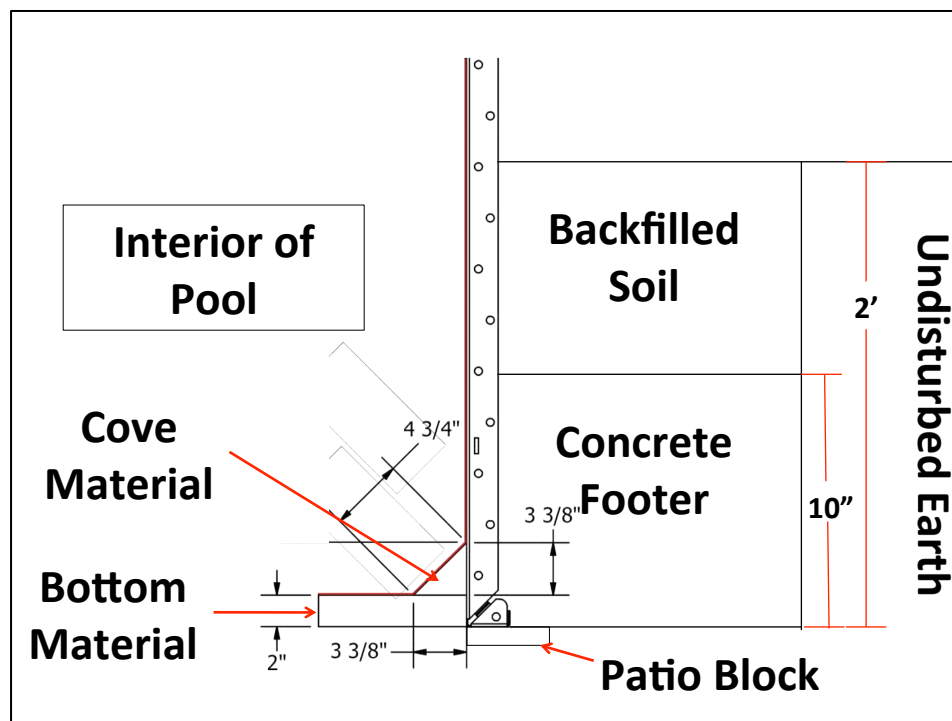
(Step 13) If using T-Connectors - Provided with skirting- See Page 44

(Step 14) If using Brace Cover - Provided with Skirting - See Page 44 - 46

(Step 15) Preparing the Pool Floor: (Recommended tools – Shovel, rake, wheel barrow)

As mentioned before, it is recommended that a 2"-3" layer of clean, washed masonry sand be put down as the base for your pool floor.

- You will want to rake the sand out to create an even layer throughout the bottom of the pool.
- As you are raking the sand, you will want to pay close attention to ensure that anything that could puncture the liner is removed from the sand(ie. Sticks, stone, roots, etc.)
- If a hard bottom is desired you can also use a dry masonry mix for the pool bottom. This is a mix of cement, masonry sand and water.
- The mix will need to be raked out and troweled to a smooth finish.
- Regardless of the type of bottom you are using, you will need to install a 4 3/4" cove around the entire interior perimeter of the pool. (See diagram below) The weight of the water that will go into the pool is tremendous and failing to complete this step could result in the liner getting pushed out under the pool wall.
- The cove can be made of either bottom material or manufactured cove material (provided it meets the 4 3/4" dimension) and will need to be installed at the bottom of the wall panels.



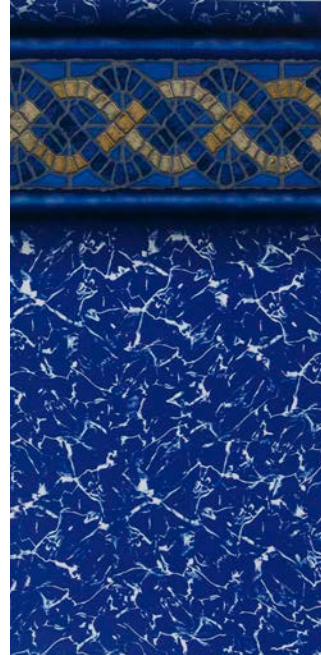
(Step 16) Liner installation:

Liner Options: If Pool Liner is purchased

If liner is purchased please note that there are two available color choices and they will be made to fit your pool with a flat bottom.



The Majestic



Dynasty



Liner Installation Cont:

- Installing a new liner requires a certain level of care to ensure that the liner does not get punctured. Prior to getting started you will again want to check the pool floor for anything that might cause damage to the liner, this includes everything from roots and sticks to sharp stones.
- When you are certain that there is nothing on the pool floor that could damage the liner you are ready to begin the installation of the liner.
- Before setting the liner you will need to install one skimmer gasket. PVC glue or silicone will both work well to secure the gasket to the skimmer face.
- Next you will want to put a strip of duct tape down each panel joint to help create a smooth surface for the liner to rest against. Once that is complete you are ready to set the liner.
- The easiest way to do this is on the interior of the pool. To ensure that the liner does not get damaged it is best to remove your shoes before walking on the liner during the installation.
- Start on one side of the pool and work your way around the pool locking the bead located at the top of the liner into the bottom bead receiver portion of the coping.
- If your pool is an oval or Grecian shape you will want to make sure that the liner is properly situated in the pool prior to beginning its installation. There will be a seam in the liner where the wall portion meets the floor portion and it will follow the bottom of the wall all the way around the pool. If the liner is not properly situated in the pool when you start, it will soon be apparent and you will need to make adjustments.
- As you move around the pool you will find it beneficial to 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.
- Once the liner is locked in all the way around 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 hose of a shop vac down behind the liner. You want the vac hose to be as low as possible without sucking up sand.
- You want to get as good of a seal as possible so you may need to tape off the openings of the return and skimmer from the outside of the pool. Once this is done you can turn the shop vac on. After a few minutes you will start to see the liner getting sucked back against the walls of the pool.
- While this is occurring, if there are still wrinkles in the floor of the pool, you can again use your feet (without shoes) to help push the liner against the walls which will help to remove the wrinkles. Once the liner is wrinkle free and sucked back against the walls you can begin filling the pool with water.
- If using a standard garden hose, this may take a while. You will want to turn the water off when the water level in the pool is just below the return opening. This will allow you to cut in the return and skimmer without getting wet.

Cutting in the Skimmer and Return:

- By waiting until the water level is just under the return you can be sure that the liner is fully stretched and will not tear when more water is added. If cutting the returns and skimmer in before adding water you run the risk of the liner tearing when water is added.
- When cutting in the return and skimmer you will want to be very careful and precise. Putting a hole in the wrong location can lead to leaks.

Skimmer:

- For this step you will need the supplied screws that came with the skimmer as well as the 2nd gasket and the skimmer faceplate. You will also need a razor knife, Phillips screwdriver, and an awl.
- Place the gasket on the backside of the skimmer faceplate. Make sure that the holes in the gasket are in line with the holes in the skimmer faceplate.
- Next you will feel for the corner hole in the skimmer mouth itself. Press on the liner against the perimeter of the skimmer mouth. Where there is a hole you will be able to feel it as a depression in the liner when pressure is applied.
- Once you are certain that you have located a corner hole in the skimmer mouth, push your awl through the liner creating a hole.
- Then find the corresponding hole in the skimmer faceplate/gasket, and insert a skimmer screw.
- Insert the tip of the screw into the hole that you have previously made in the liner with your awl.
- Carefully tighten the screw to the point that it is about half way into the hole.
- Repeat this process on the other 3 corners.
- Once all 4 corners have been started you can then tighten the screws down being careful not to over tighten.
- With the 4 corners tight against the skimmer, you can then install the remaining screws using your awl to puncture the liner through the remaining open holes in the skimmer faceplate (one at a time), and tightening the screws down. (Again, be careful not to over tighten the screws)
- When the gasket and faceplate are properly installed you can remove the liner material from the inside of the skimmer mouth with a razor knife.
- You may find it beneficial to start by cutting a cross pattern so that the two cuts intersect in the center of the skimmer mouth. This way you are removing 4 small sections of material rather than one large piece.
- When the skimmer is successfully cut in you can then install the beauty plate over the skimmer faceplate to hide the screws.

Return:

- This is a similar process to the skimmer cut in, however you will only be working with 4 screws.
- The return faceplate can only be successfully installed if it is oriented correctly. The backside of the faceplate has a “notch” cut out of it that must line up with the return body correctly. If not the faceplate will not sit flat against the return body and could result in a leak.
- When you have the faceplate position correctly you will want to feel for the screw holes in the return fitting through the liner.
- Once the holes are located you will again push your awl through the liner and into a hole in the return body.
- Next located the corresponding hole in the faceplate and gasket and insert a return screw.
- Insert the tip of the screw into the hole that you previously made in the liner with your awl.
- Tighten the screw to the point that it is about half way into the hole in the return body.
- Repeat this process for the remaining 3 holes.
- When all 4 screws have been started you can then tighten each one the rest of the way being careful not to over tighten. (Over tightening the screws could crack the faceplate, which could lead to a leak).

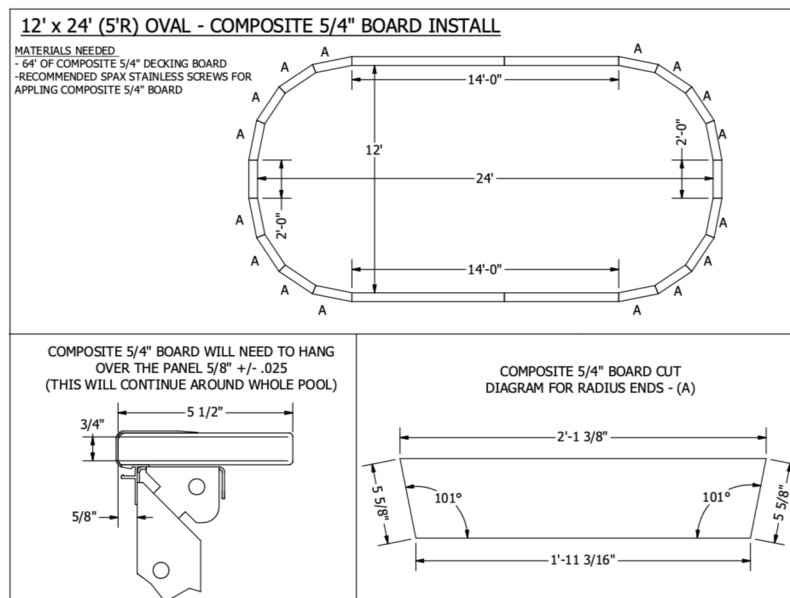
Optional Item Installation Details

Optional Composite/ Wood Top Rail:

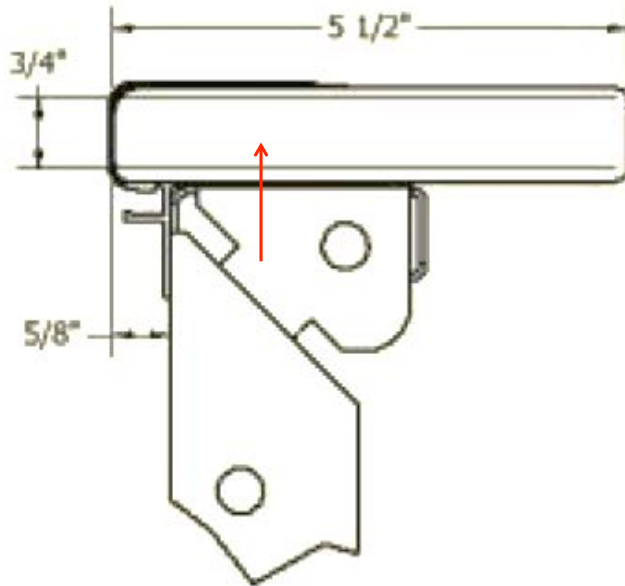
This is optional and will **need to be purchased separately from the pool if desired**. It will give your pool a nice finished look, and a composite material will stand the test of time. Treated wood can also be used if desired. If purchased, regardless of the material, it will be installed on the top flange of the pool as specified in the pool drawing pack.

- Each board can and will need to be cut to size, and each of the ends will need to be cut at the appropriate angles as specified in the top rail layout drawings. (Available upon request)
- The top flanges of the pool walls have pre-drilled holes that will be utilized to run a screw through to secure the composite/wood to the top flange from underneath the panel flanges. Below is an example detailing how the composite/wood can be installed.

SAMPLE DRAWING



* Complete Composite / Wood Top Rail Layout Available Upon Request.



Composite or Wood top rail to be installed by driving screws through pilot holes in top flange of wall panels from the under side of the flange and into the composite or wood material.

- As mentioned before, the top flanges of the steel pool wall panels will have pre drilled holes in them to be utilized as a pilot hole for securing the boards to the top flanges of the steel pool wall panels.
- The boards will be secured to the top panel flanges by running a screw through the hole in the top flange of the panel from the under side of the panel flange.
- Please note that it is important to drive a screw in each available hole in the top flange of the panels.

Installing the Optional Light:

Please follow the manufacturer's installation procedure provided in the box with the light.

Installing the Optional Insulation kit:

- An insulation kit can be ordered for each shape and size of available pool.
- The insulation kit is shipped in 23" x 51" sections and some sections may need to be cut down to the appropriate width to fit within the backside of each panel on the pool.
- Each section will have a strip of adhesive running vertically down the center, which will be covered by a strip of peel away paper. The adhesive is there to adhere the insulation section to the back of the steel pool walls. Simply peel off the paper strip and stick each section of insulation to the back of each steel panel. (See Image Below) **(Image depicts a row of steel skirting panel support which will be installed After installing the insulation kit around the pool)**



Note: Must use Doughboy's Hard Plumb Kit (Prod#1115-0752/Dealer Cost of \$18.00) when using the Semi Onground - Hydrosphere Skirting Panels or Insulation Kit.

Installing the skirting supports: This step will require the supplied screws #7, Impact driver, 5/16" Nut driver, vise grips or C clamps, and the provided foam blocks (#19)



- 1. Three row of skirting supports will be placed around each pool. Start at a panel joint and place skirting support at the appropriate height (13 7/8" up from the bottom of the wall panel). This will be the bottom row.
- The skirting support must be at the appropriate distance from the face of the wall panel as well. **(Helpful Hint - Use a provided foam block (#19) to achieve the appropriate distance by temporarily placing it between the wall panel and skirting support next to the panel joint)**
- Use a clamp or help from another person to hold the support at the appropriate height and distance from the face on the

- 2. Secure the support to the side flange of the panel with a self tapping screw #7
- You may find it beneficial to use two screws to secure the support and prevent it from pivoting.





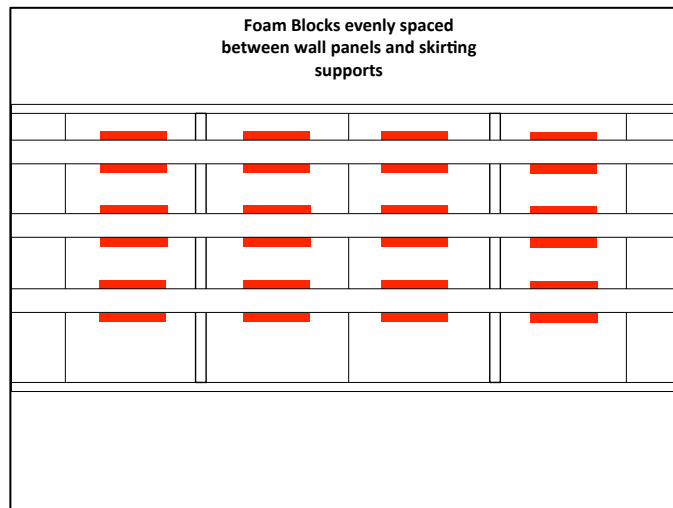
- **3. Pull the free end of the first support out and Repeat steps 1 and 2 at the next panel joint with a second skirting support.**



- **4. The loose end of the first support will overlap the secured end of the second support just enough to drive another #7 screw or two.**
- **Attach the loose end of the first support to the secured end of the second support using #7 screws.**
- **5. Continue this process around the perimeter of the pool until all of the skirting supports are installed.**

Note: Skirting supports will be placed through the slots on each

6. Next you will need to install the provided foam blocks between the back of the pool wall and the skirting support. Make sure that the surfaces of both the wall panels and the skirting supports are clean and free of debris. Then simply peel the film off the back and of the block and press it against the pool wall just behind the skirting supports. You will want at least 2 foam blocks evenly spaced between each panel joint to provide extra support for attaching the skirting panels. (See image below)



- Once completed you are ready to begin the installation of the skirting panels.

Installing the skirting panels: **Note - This step needs to be done after pouring footer.**



Note: Must use Doughboy's Hard Plumb Kit (Prod#1115-0752/Dealer Cost of \$18.00) when using the Semi Onground - Hydrosphere Skirting Panels or Insulation Kit.

Each pool will have the option of synthetic wood skirting to be installed around the perimeter of the pool. The skirting is secured to the outside perimeter of the pool by using the provided screws (#7) to attach each piece of skirting material to the pool wall at the top and bottom. The top of the skirting will be screwed to the top flange of the pool wall and the bottom will be attached to the provided steel skirting supports. This will give the pool more of a finished look. This option is beneficial if you are not planning on installing a deck around the pool. The skirting material is made up of synthetic wood paneling that will come pre cut at 4' x 6' and will be installed around the outside perimeter of the pool and flush with the top flange of the pool. Each skirting kit will also include steel skirting supports, T strips for each joint in the skirting material, and brace covers for each brace on the pool if needed. See below for a list of appropriate skirt panel and T strip quantities for each specific pool shape and size.

Ovals:

- **12 x 24 Oval** – 14 Skirt Panels – 4 T Strips – 10 Brace Covers
- **15 x 30 Oval** – 15 Skirt Panels – 6 T Strips – 10 Brace Covers
- **18 x 33 Oval** – 16 Skirt Panels – 10 T Strips – 12 Brace Covers

Rounds:

- **15' Round** – 59' Skirt – 1 T Strip
- **18' Round** – 69' Skirt – 1 T Strip
- **21' Round** – 78' Skirt – 1 T Strip
- **24' Round** – 87' Skirt – 1 T Strip
- **28' Round** – 100' Skirt – 1 T Strip

Grecians:

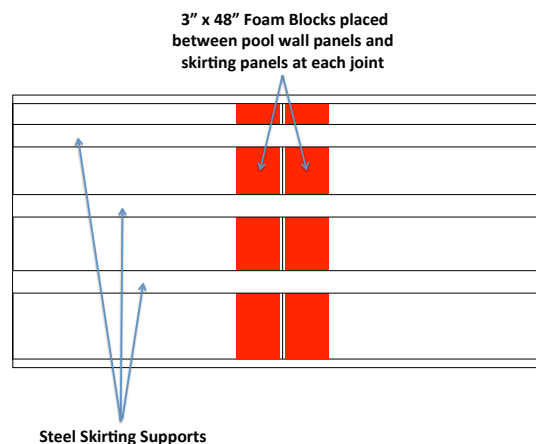
- **12 x 24 Grecian** – 14 Skirt Panels – 4 T Strips – 10 Brace Covers
- **14 x 28 Grecian** – 18 Skirt Panels – 4 T Strips – 14 Brace Covers
- **16 x 32 Grecian** – 17 Skirt Panels – 7 T Strips – 17 Brace Covers
- **18 x 36 Grecian** – 21 Skirt Panels – 8 T Strips – 20 Brace Covers

Freeform:

- **13 x 22 Freeform** – 10 Skirt Panels – 6 T Strips – 8 Brace Covers
- **16 x 28 Freeform** – 13 Skirt Panels – 8 T Strips – 9 Brace Covers
- **18 x 32 Freeform** – 14 Skirt Panels – 10 T Strips – 9 Brace Covers

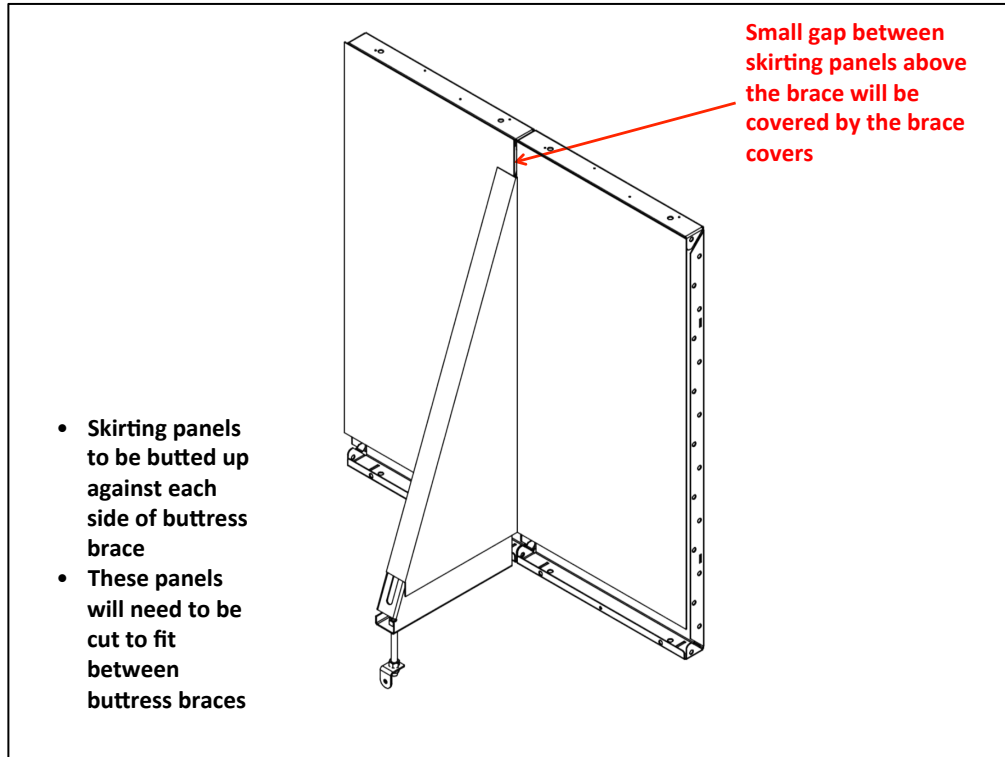
*** Please note that due to the unknown nature of your landscape you may need to trim each skirting panel. It is highly recommended that no more than 6" of backfill material be against the skirting material anywhere around the pool.**

- Start by placing a section of skirting against the pool wall. You will want to start a few inches past a panel joint. Secure one corner of the section of skirting material to the backside of the pool wall with the provided screws (#7). Be careful not to tighten the screw to the point at which the skirting material begins to crush. You will want the top of the skirting to be flush with the top of the pool wall.
- If not using the insulation kit you will also need to install the provided 3" x 48" foam blocks (#20) at each joint in the skirting material. This will help to keep each section of the skirting material flush with one another.
- Simply place two foam blocks, evenly spaced behind each section of skirting at the skirting joint. (See image below)

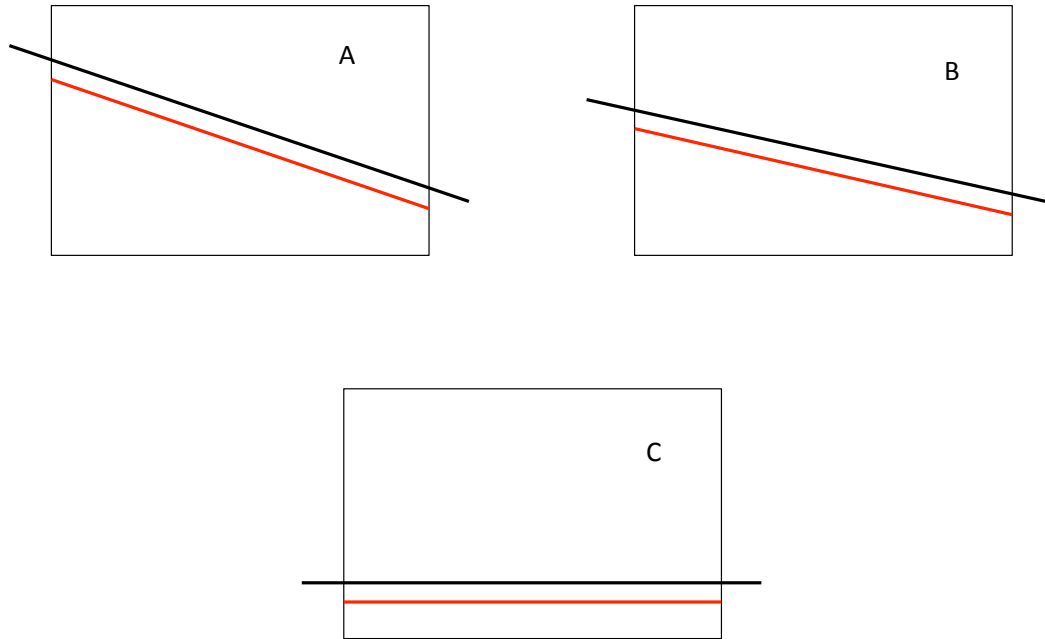


- When installing skirting panels on the radius of a pool (Ovals and Rounds) you will want to make sure that you drive the screw in between the flange segments of the pool walls top flange. (Drive screws as high as possible so they will be hidden once the top rail is installed)
- Raise the other end of the skirting section into place keeping it flush with the top of the pool wall and secure it with another screw.
- Secure the rest of the skirting panel to the top of the wall panel by driving a screw every 8 to 10 inches and be sure to leave the last screw at least 1" away from the end of the skirting panel.
- Next, secure the bottom of the skirting panel to the pool wall by driving screws through the panel and into the skirting supports. Again you will be driving a screw every 8 to 10 inches.
- You will attach each skirting panel to the pool in this way. However, you will want to leave a small gap (1/8") between each section of skirting panel to allow enough space to install the T connectors (T shaped joint covers) between each skirting section.
- You may have to cut the last section of skirting that you install down to the appropriate size to fit properly.
- If installing the skirting paneling on a pool that has straight wall sections such as an Oval or Grecian shape you will likely need to cut some sections of the paneling to allow them to butt up to the buttress braces. You can use a circular saw to do this.
- You will repeat this process on every section of skirting that will reside along the straight wall of the pool where a buttress brace is installed. (See Image Below)

Note: Must use Doughboy's Hard Plumb Kit (Prod#1115-0752/Dealer Cost of \$18.00) when using the Semi Onground - Hydrosphere Skirting Panels or Insulation Kit.



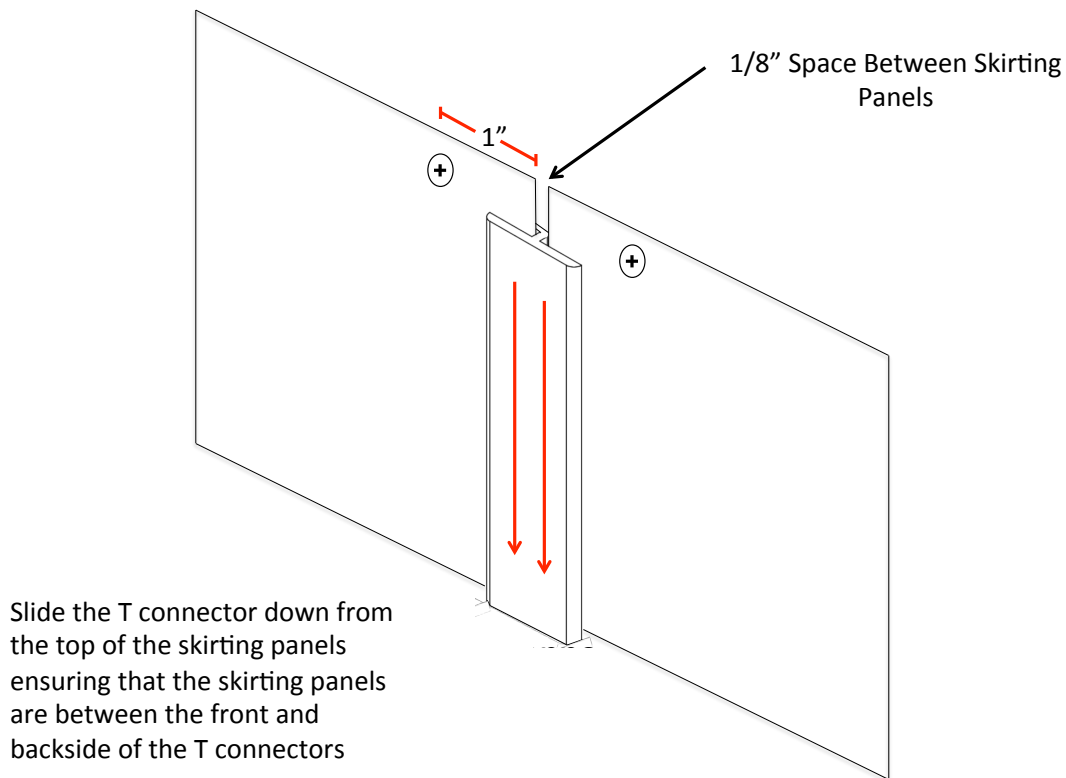
- In addition to cutting the skirting panels at each panel joint that will have a buttress brace installed, you will also need to cut the skirting material to allow the skimmer and return to be installed and plumbed.
- The skimmer, once installed will stick out further than the skirting material, thus the skirting material must be cut to allow the skimmer mouth to pass through and attach to the wall of the pool.
- The return fitting once installed will not stick out further than the skirting material however for plumbing purposes you will need to cut a hole in the skirting material to allow a plumbing pipe to pass through and connect to the return fitting.
- As mentioned before depending on the topography of your backyard you may need to trim the skirting panels so that any backfill material against the skirting is no more than 6" up on the skirting material. (See Image Below) The red line represents the bottom edge of the skirting material in different scenarios. The black line represents backfill material against the skirting (No more than 6" up the skirting)



*** Special Note about Skirting for Round pools: The skirting material on all available round pools will come as one continuous roll. There will be one joint where the beginning and end of the skirting material meet. This is the only place that will require the use of a T strip. The skirting will be installed in the same manor as the other shapes detailed above however rather than having multiple sections of skirting material, there will be just one continuous sheet to span the entire outer perimeter of the pool.**

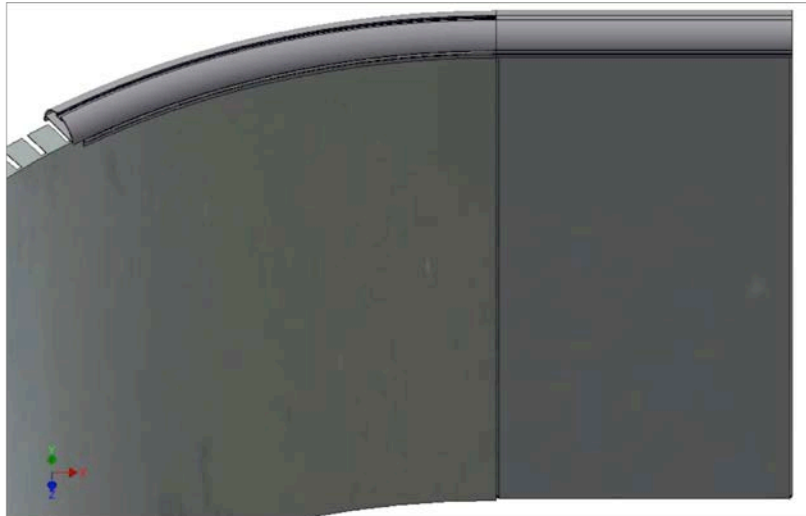
Installing the T Connectors:

- Once all sections of skirting have been installed on the pool you will install the T connectors.
- The T connectors will be installed at each skirting joint **Before The Top Rail** by sliding the T connector down from the top of the skirting panels ensuring that the skirting panels are between the front and back of the T connector. (See image below)
- The T connectors will ultimately be butted up against the bottom of the top rail by sliding them up against the top rails once they are installed.

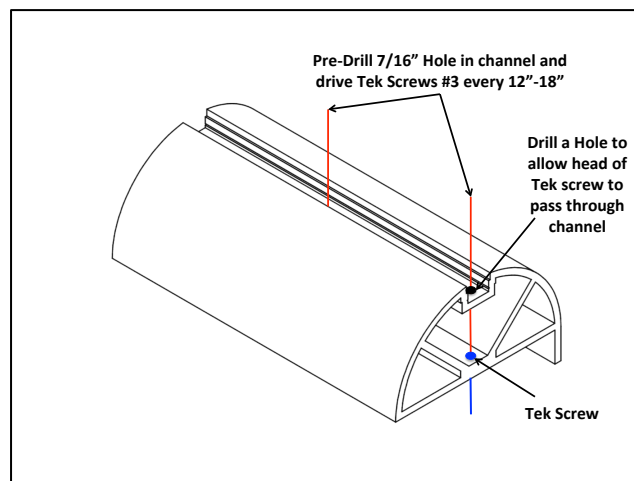


T-Connector Installation

Installing the Optional Top Rail:



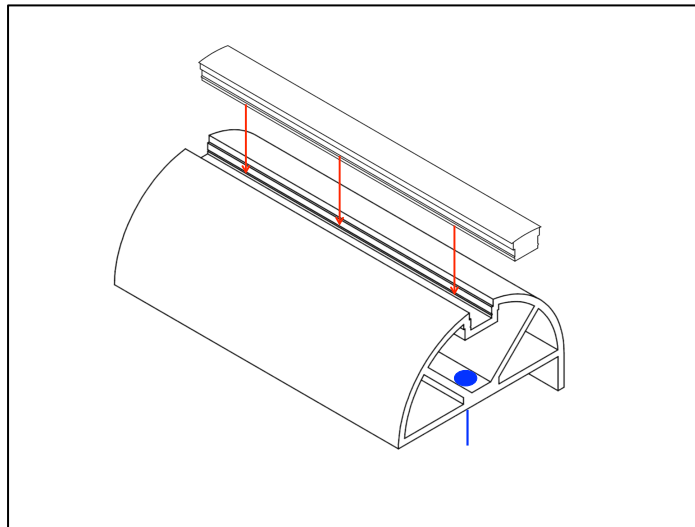
- Regardless if using the standard top rail or the deck mount top rail, the top rail will come in 8' sections. It will be installed on the top flange of the pool walls. This will conceal the top of the pool wall, skirting panels, and T strips all the way around the pool.
- The top rail is secured to the top of the panels using self-tapping screws #3 approximately every 12" - 18" around the pool. (See Below)



- Pre-drill a 7/16" hole through the top of the top rail in the center of the channel while being careful not to drill through the bottom of the top rail. This will allow the head of the screw to pass through the channel.
- You will continue around the perimeter of the pool in this fashion until the entire perimeter is covered with the top rail. (You may need to cut excess off to fit)
- When installing the top rail on a Grecian shaped pool it is ideal to start with the 45-degree corners of the pool.
- The top rail is flexible enough to bend around the 45-degree corner with ease.
- Secure one side of the 45-degree corner down using a tek screw as close to the corner as possible. Next secure the top rail just on the other side of the corner as close to the corner as possible.
- From there move out from the corner 12" to 18" and secure the top rail down.
- Repeat this process at every 45-degree corner.
- Another option would be to make 45-degree cuts on the ends of two pieces of top rail and butt them up together in the corner. (Keep in mind that there are no 45-degree top rail clips to conceal the joints in the corners)
- Once all of the corners are secure you can begin installing the straight sections of top rail between the corners. (You will need to cut off any excess top rail)
- Once the top rail is secured to the top of the pool walls, the top rail insert can be installed to hide the channel containing the screws.

Installing the Top Rail Insert:

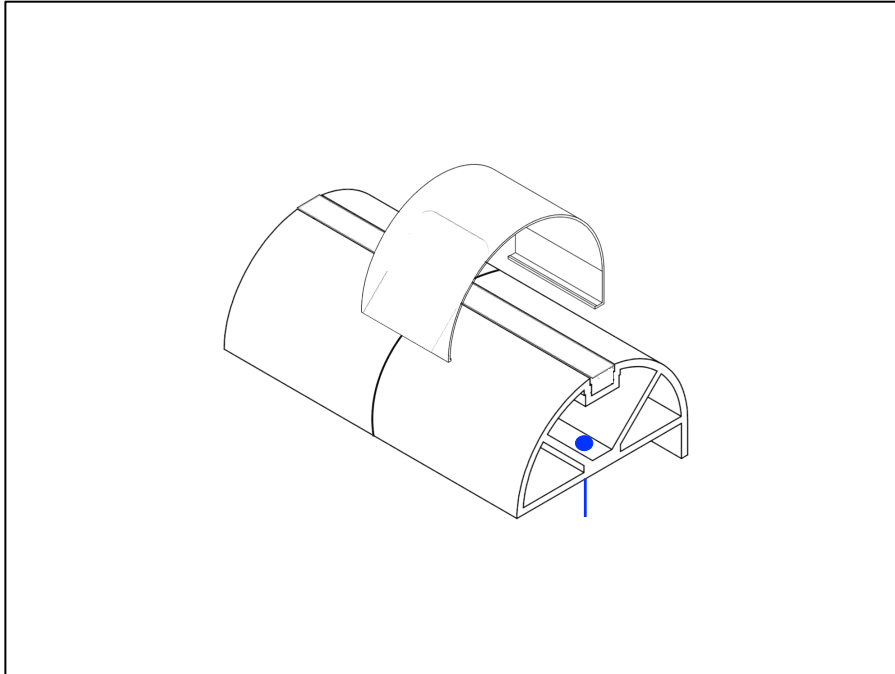
- Once all top rail sections are installed you will need to install the top rail insert.
- You will need to apply the Funmastic Adhesive (#23) prior to installing the top rail insert.
- Simply apply a bead of the adhesive in the center of the insert channel around the entire perimeter of the pool walls.
- This adhesive will become tacky and help to keep a secure hold of the top rail insert piece.
- Once the bead is applied in the insert channel you can begin installing the top rail insert.
- The top rail insert will come in rolls containing the needed amount based on the size of pool that is ordered.
- This will sit flush in the channel of the top rail, which will effectively conceal the channel and tek screws contained with in it. (See Image Below)



- The top rail insert simply snaps into place when adequate pressure is applied. (A rubber mallet may help to snap the insert into place)
- A good way to hide the joints of the top rail insert is to line the joints of the top rail insert up with the joints on the top rail itself. (You will be installing top rail clips over the joints in the next step which will conceal the joints)
- You may need to cut the last piece of top rail insert to fit.
- Once all the top rail insert pieces are installed you are ready to install the top rail clips.

Installing the Top Rail Clips:

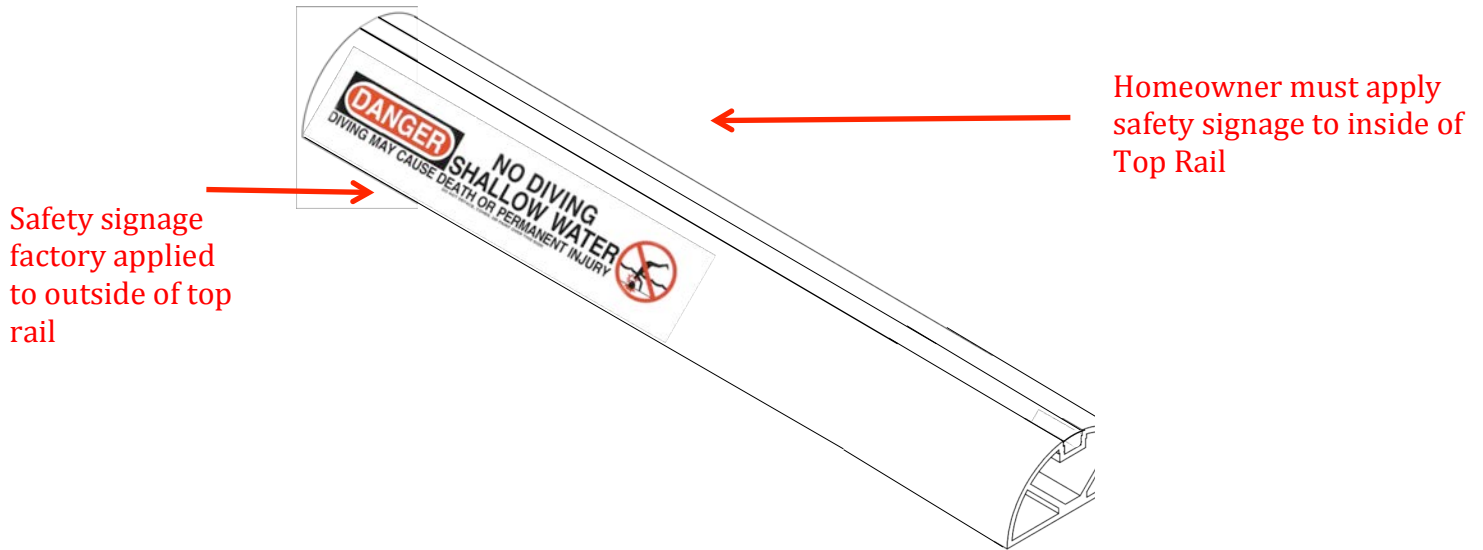
- As mentioned above, the top rail clips are designed to conceal the joints in the top rail pieces. (See image below)



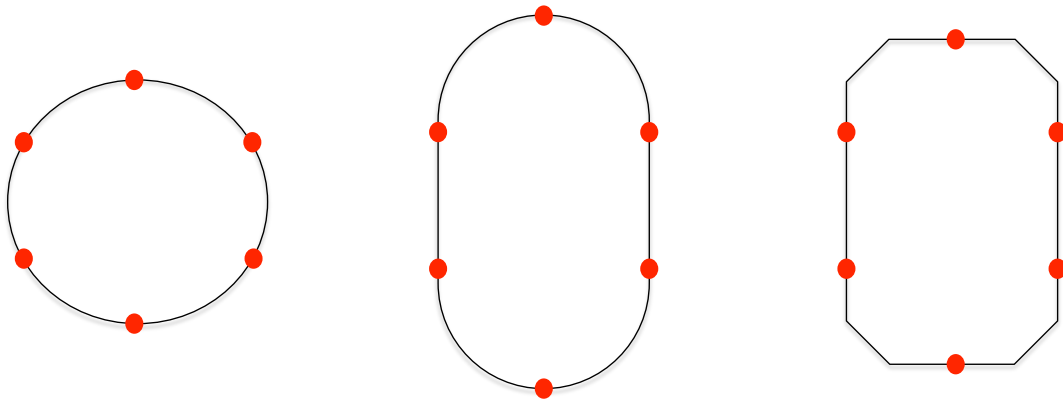
- The top rail clips will be secured to the top rail by snapping them down over the top rail.
- If standing inside the pool, you will hook the backside of the clip on the backside of the top rail and then push the front of the clip down until it snaps into place.
- Be sure to center the clip on the joint. The goal here is to make sure that the joint in the top rail is directly underneath the center of the clip.
- You will repeat this process at every top rail joint around the pool.
- When all clips are installed you are ready to install the mandatory safety signage.

Installing the Mandatory Safety Signage:

- For your convenience and safety, No Diving Stickers have been factory applied to the outside section of each top rail.
- Additional safety stickers are provided with every pool kit and must be installed on the inside of the top rail for the pool by the homeowner or installer.



- Each safety signage pack will come with 14 of these top rail safety signs. These should be distributed evenly around the perimeter of the pool. (See images below for recommended safety signage placement for each shape of pool)



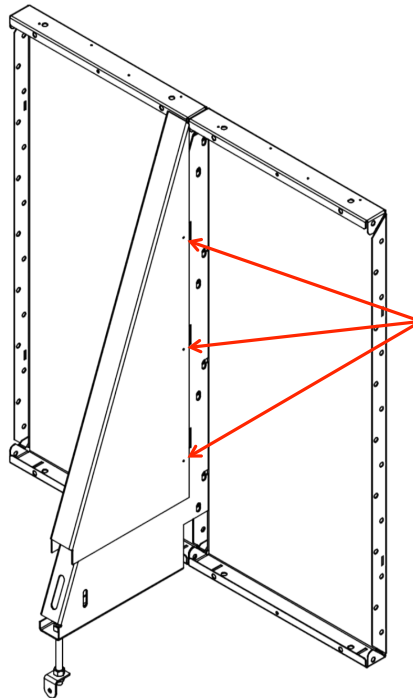
*Please note that some signage is applied in the factory, however it is your responsibility to apply additional signage as noted.

Brace Cover Installation:

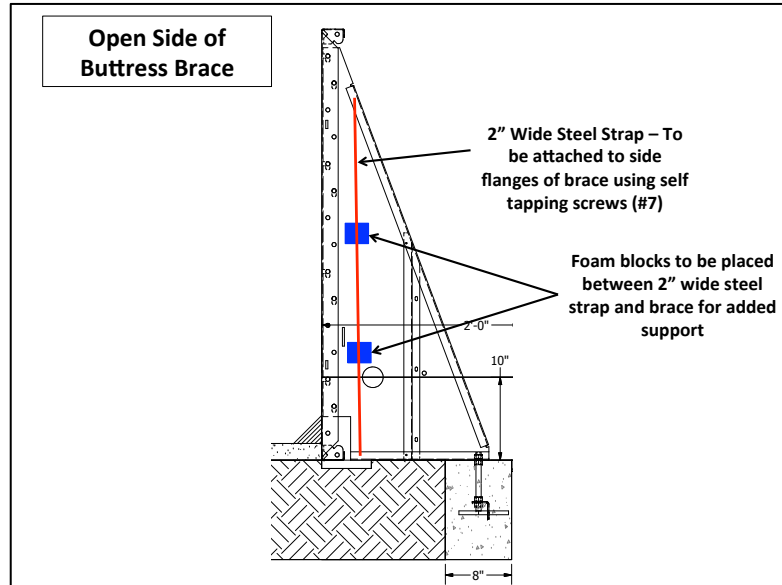
If installing the skirting on a Grecian or Oval shaped pool, the buttress braces will need to be covered with the supplied brace covers. This step will require the supplied brace covers (#11), brace cover screws (#7), the supplied 2" wide steel straps, and the supplied foam blocks (#19).

- The supplied 2" wide steel straps will need to be attached to the brace on the open side of the brace. The brace cover will be screwed to the strap on the open side of the brace.
- The brace cover will come as one piece. It will be slid down over the brace from the top.
- Once in place you will use the supplied screws (#7) to secure the cover to the brace in the locations specified in the diagrams below.

Brace cover will have pilot holes to be used for screwing cover to brace



Attach to skirting using screws (#7) on both sides of braces through the pilot holes in brace cover (Open side will be secured to 2" wide steel strap)



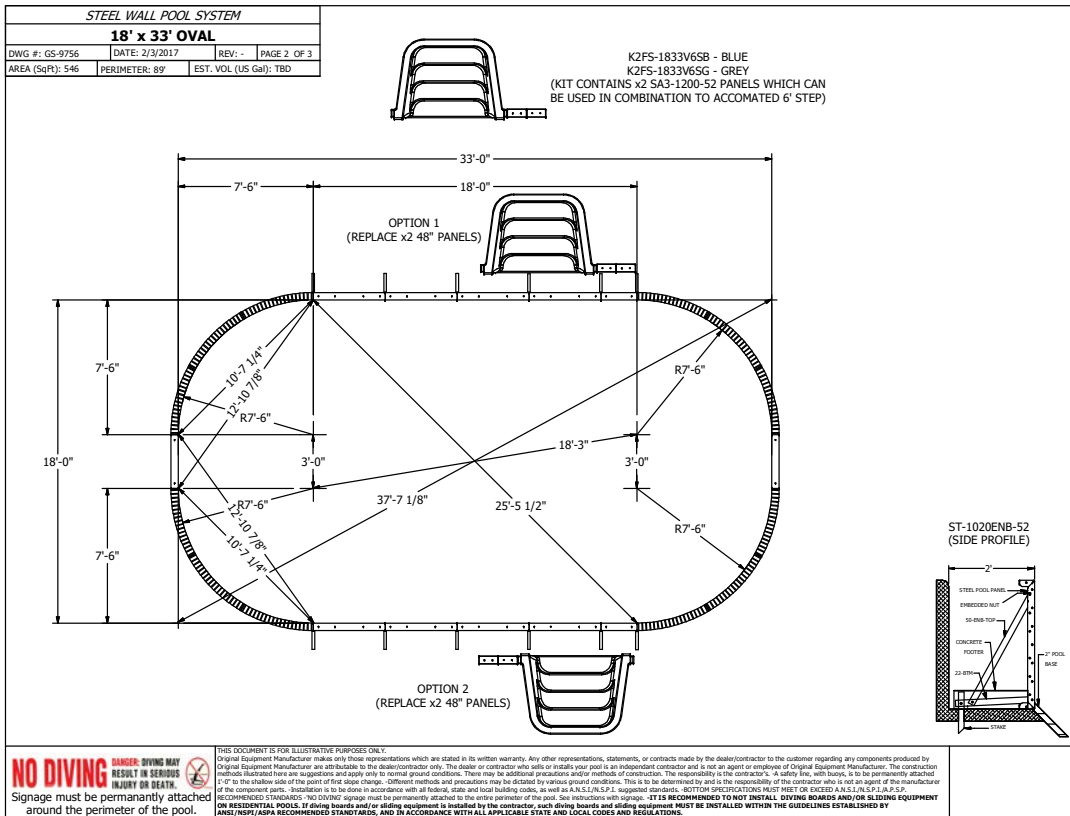
* Repeat this process for every brace on the pool.

Installing the optional Step Ladders:

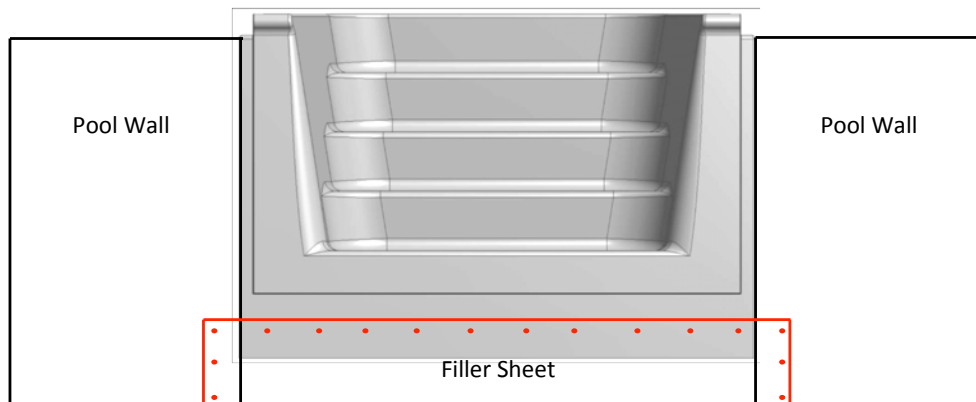
Please follow the manufacturers installation procedure provided in the box with the ladder.

Installing the Fiberglass Step (Optional):

If the pool was ordered with a step, it will come with two filler panels that are needed to attach the step to the rest of the pool and will need to be installed. (See image below)



- Because the step is 48" tall and the pool walls are 52" tall, you will need to raise the step to the height of the wall panels and install the provided filler sheet to fill the void under the step. (see image below)



* Use pan head, self tapping screws to attach the filler sheet to the pool walls and step.

- 3/8" holes will need to be drilled into the step to bolt it to the wall panels on either side. The easiest way to do this is to use vise grips or clamps to hold the step in position with the wall panels.
- The front side of the step (closest to the inside of the pool) will need to be in line with the wall panels on either side both front to back and up and down. Once the step is properly aligned with the wall panels you can begin drilling the holes into the step.
- Use the existing holes along the **back** edge of the steel wall panel side flanges as a template for drilling.
- **Do not drill through the holes closest to the face of the panels.**
- You can drill one side of the step at a time.
- Once holes have been drilled, using nuts and bolts (#1 & #2), secure the step to the wall panel. When one side is secure you can then move to the other side and repeat the procedure. Please see step diagrams for the appropriate filler panel and step details for each size and shape pool.
- A brace will need to be installed on both sides of the step where the wall panels meet the step.
- Check the square of the pool; check the diagonals of the pool walls. These measurements will be provided on the pool drawing.
- Check the width at various points along the long walls.
- Check overall length of the pool.

If Concrete deck is needed around the pool:

It is recommended that the pool be backfilled with a non-compressive material. For further recommendations please contact your concrete contractor.