

hydrosphere SERIES

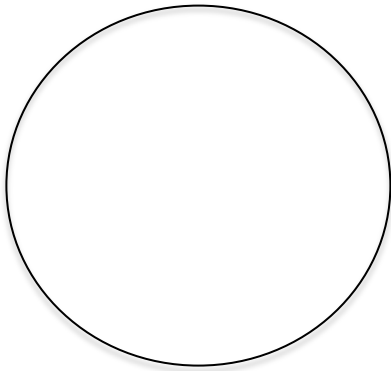
Semi-Inground Pool by Doughboy



Table of Contents

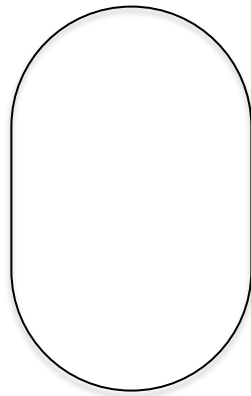
Offered Sizes.....	3
Hardware List.....	4-7
Disclaimer.....	8
General Information.....	9-10
Installation Procedure.....	11-28
Optional Item Installation Procedures.....	29-47

POOL SHAPES AND SIZES



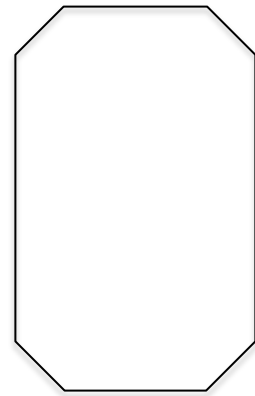
Round

15'
18'
21'
24'
28'



Oval

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

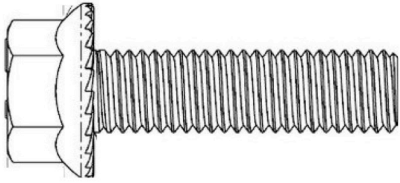


Grecian

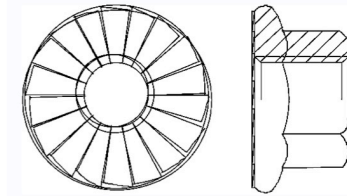
12' x 24'
14' x 28'
16' x 32'
18' x 36'

* See Spec Book for Details

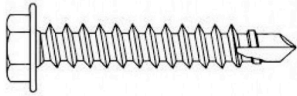
Hardware List



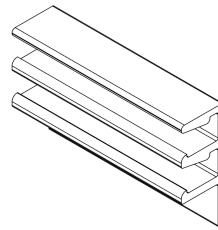
#1. 3/8" Serrated Hex Flange Bolt – Zinc
Used for bolting wall panels together



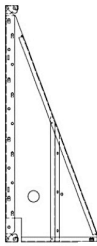
#2. 3/8" Serrated Hex Flange Nut – Zinc
Used for bolting wall panels together



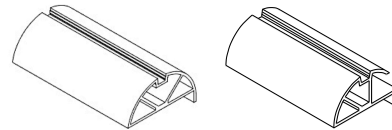
#3. 1" Hex Flange Tek Screw – Zinc
Used for Installation of F Track and Top Rail



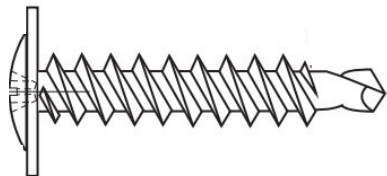
#4. 8' Stick Aluminum F Track Bead Receiver
Used to Hold Liner Bead at Top of Panel



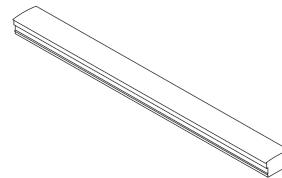
#5. Buttress Brace
For Use on Pools w/ Straight walls



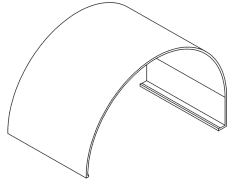
#6. Top Rail (Standard or Deck Mount) – Optional
Used on Top of Walls to Provide Finished Look



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



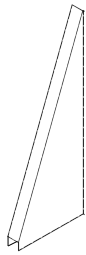
#8. Top Rail Insert
Used as Beauty Piece to Conceal Top Cap
Screws



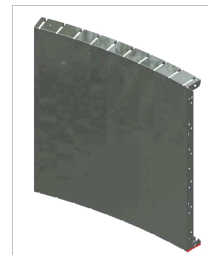
#9. Top Rail Clip
Used as Beauty Piece to Conceal Top Rail Joints



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



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



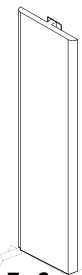
#12. Radius Wall Panels
Used in Round and Oval Pools to Create the
Rounded Edges of the Pool



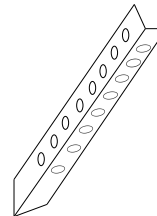
#13. Straight Wall Panels
Used in Grecian and Oval Pools to Create the
Straight Edges of the Pool



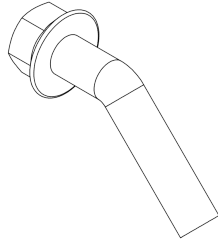
#14. 4' x 6' Skirting Panels - Optional
Used on the Outer Perimeter of the Pool to
Provide Finished Look



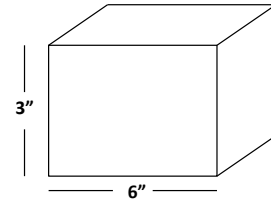
#15. T - Connector
Used for concealing joints in skirting
panels



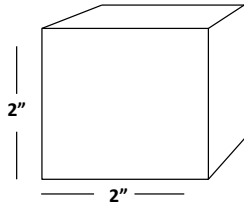
**#16. V Stake – Used for Panels and
Brace**



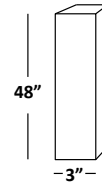
#17. 3/8" Bent Serrated Hex Flange Bolt – Zinc
Used for bolting 45-Degree corners of Grecian shape pools



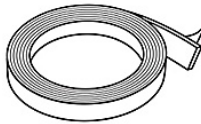
#18. 3"x6" Foam Block
Used for attaching skirting material to pool walls



#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



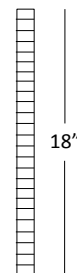
#21. Double Sided 3M Tape – Used to Attach T Connectors to Skirting Panels



#22. 45 Deg Corner – Used Only on Grecian Shaped Pools



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



#24. 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:

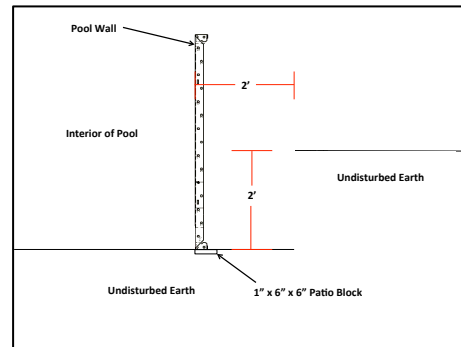
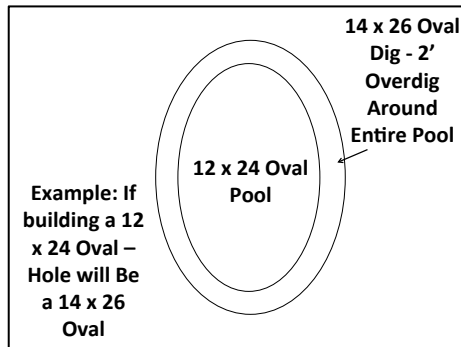


- The surface on which your pool will stand must be level and solid. The best surface to build on is bare, solid, and free from stones, or any other sharp objects that could puncture the liner.
- The site must be accessible to electrical and water supply and should allow for the disposal of large quantities 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)

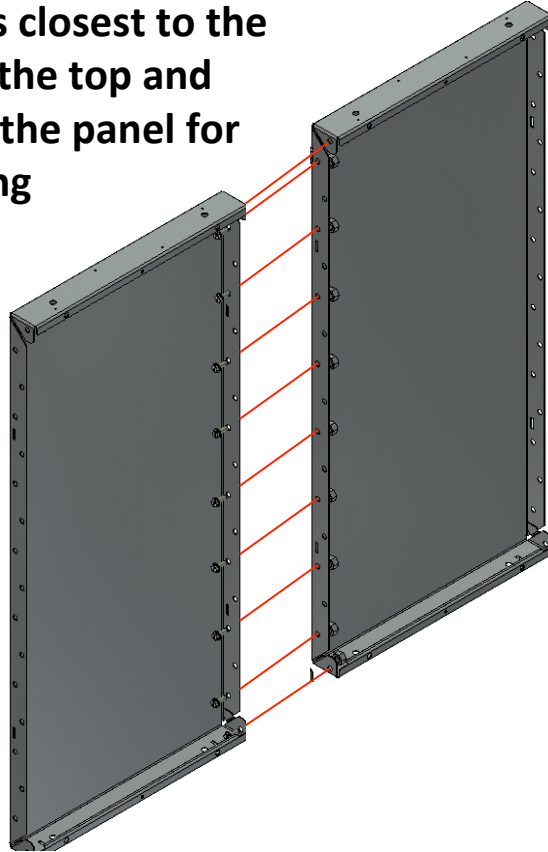


- Once the shape of the pool is marked on the ground the entire area will **need to be dug down a minimum of 2'**. The pool location must be 100% level. For this you will want to use a laser transit. Typically the ground will need some amount of leveling and rather than trying to raise any area, it is 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.

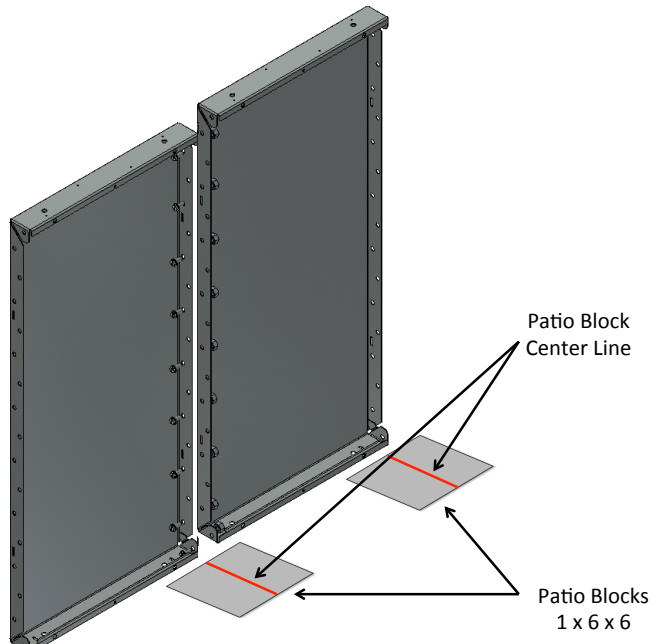
- To give the pool walls the best possible base to sit on it is recommended that a layer of compacted stone dust be put down and leveled. Patio blocks can then be placed around the perimeter of the pool where each panel joint will be. The patio blocks should be 1 x 6 x 6 and should be recessed into the 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 / Buttruss 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.**

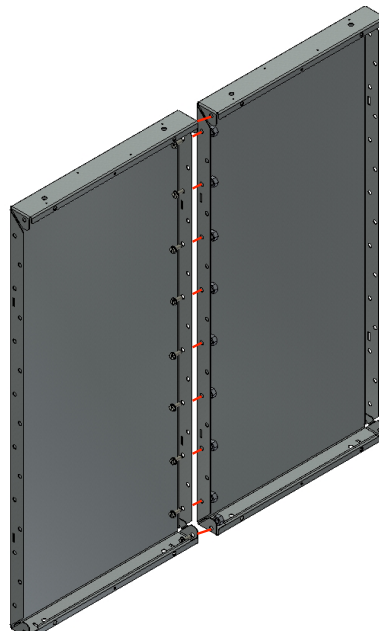
Only use the holes closet to the face as well as the top and bottom holes of the panel for bolting



- 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)



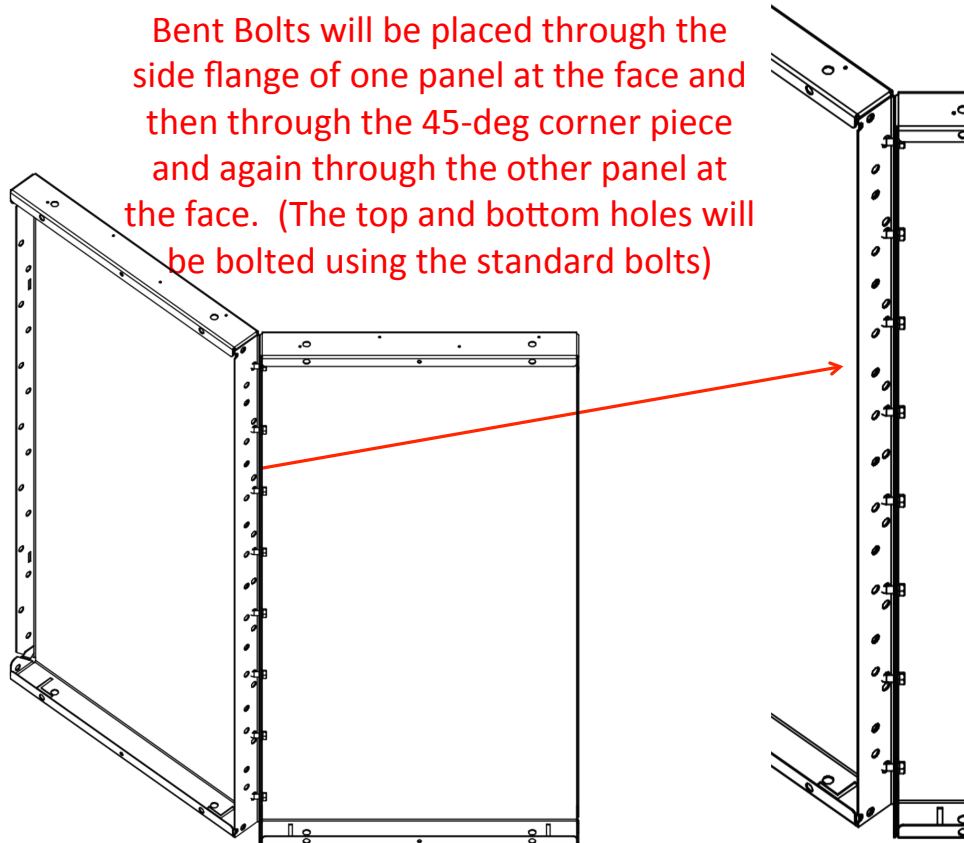
- Every wall panel that gets set should fall in line with the centers of each patio block all the way around the pool.
- To connect the wall panels together you will need a 9/16" socket/ratchet, a 9/16" open ended wrench, and the supplied bolts (#1) and nuts (#2). When bolting the panels together you 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)