

Installation Manual

STEEL INGROUND POOL



PRECISION **POOL**
PRODUCTS

WARNINGS TO INSTALLER

A safety package should be provided with the pool. Its contents should be reviewed with the pool owner. The package should include a pool safety sign, "NO DIVING" decals and placement instructions, the APSP Minimum Standards for Residential Swimming Pools, and safety booklets such as: **The Sensible Way to Enjoy Your Inground Swimming Pool, Plan Your Dive; Steer Up, and Children Aren't Waterproof**. You may obtain a safety package by contacting:

Association of Pool And Spa Professionals
211 Eisenhower Avenue
Alexandria, Virginia 22314

The installer should place all warnings according to the manufacturer's instructions prior to use of this pool.

NOTICE: It is NOT recommended to use diving and/or sliding equipment on residential pools. Such equipment, its installation, and use is the responsibility of the pool owner.

These pools are designed for private, residential use only. If this is not a private, residential pool, you should contact your local building department and the National Spa & Pool Institute for standards relevant to its use, since they may be quite different.

For Pool Regulations and Standards refer to your Installation Manual-NSPI Standards for Residential Swimming Pools.



WARNINGS TO POOL OWNER

Before using your pool, **the dealer and/or installer** should provide you with a safety package which should include a pool safety sign, "NO DIVING" decals and placement instructions, the National Spa and Pool Institute Minimum Standards for Residential Swimming Pools, and the following pool safety booklets:

1. **The Sensible Way To Enjoy Your Inground Swimming Pool**
2. **Plan Your Dive, Steer Up**
3. **Children Aren't Waterproof**



SWIMMING & DIVING SAFETY

The manufacturer does not recommend the use of diving and/or sliding equipment on residential pools. If you choose to dive, a thorough familiarity with the pool bottom, awareness of depths, and understanding of the principles of head-first entry into the water are critical factors in safe diving.

CONSIDERATIONS PRIOR TO INSTALLATION

This manual describes many of the best techniques available for installation of your pool. First read this manual through completely. Then, select the techniques that best suit your installation preference.

1 • BUILDING PERMITS Check the local building codes, if any, and regulations governing residential pools. In many communities no regulations exist. However, building permits are generally required.

2 • POOL LOCATION Select the best location for your pool. Stake out and study it carefully before the excavation begins. Take into consideration the addition of walks and patios. Note the possible access to dressing facilities. Take care to locate the pool in a sunny location. Keep in mind that trees obstruct the warming rays of the sun and litter the pool with leaves and debris.

Consider the site carefully since your pool will be a permanent installation.

Avoid placing the pool in low areas and near severe slopes. High water tables or seepage will make it difficult to form the deep end of the pool.

Grading should be such that surface drainage, rain water, and pool splash run away from the pool (approximately 2" in a 4' slope). Be careful to locate the pool so that the site does not fall directly over sewer lines, septic systems, buried pipe or wiring, and does not lie beneath telephone or electric lines. 10' off electrical lines is usually required. If you are unsure of the locations of all wires and pipes, call your local utilities for assistance. This call will insure against an unfortunate and expensive accident.

When deciding where to place the filter, bear in mind that the filter operates better if it is close to the skimmer. Place it a maximum of 20' from the skimmer and a maximum of 2' higher than the pool. Any higher than 2' impairs the efficiency of the pump. The filter can be hidden behind some bushes or put in a small attractive house covering it. If the filter is covered, be sure there is adequate ventilation for maximum efficiency of the pump and motor. The skimmer will function more efficiently if it is facing the prevailing wind.

3 • ENGAGE EXCAVATING CONTRACTOR The pool excavation is generally accomplished with the use of a backhoe. Engage an excavating contractor well in advance of the time you intend to start the pool. He will want to be sure of accessibility to the location and will want to schedule his equipment on the site to your convenience.

4 • ENGAGE ELECTRICAL CONTRACTOR An electrician is required to provide the electrical hookup from your main power source to the motor on the filter. He may also be required to provide a ground for the pool and accessories. If your pool has a light, he will also make the necessary connections to a power source. Check the local building codes governing residential pools.

5 • FENCING In most areas, building codes specify that a pool must be enclosed with some type of fencing. Check the local building requirements for residential pools.

SUGGESTED TOOLS FOR INSTALLATION

100' Extension Cord	Broom	Large Water Pump Pliers
Socket Set or Adjustable Wrench	200' of 2" Wide Duct Tape	Heavy Duty Vacuum Cleaner
100' or 50' Tape Measure	Pipe--1 1/2" x 80# Minimum Poly Pipe or PVC & Fittings	Shovel (Pointed Long Handle)
Roll of String	6' Rule	Rake
40--3/8" x 1" Rebar	Electric Drill with Attachments for Self Tapping Screws	Hose with Spray Nozzle
Regular & Phillips Screwdriver		Steel Trowel and Wood Float
Transit	Knife	Plastic Pipe Sealant
Pick	Hack Saw (Fine Tooth)	Plumb Bob
Tamper	9/16" Open-End Wrench	8' Water Tubes

POOL LAYOUT

Establish the pool location, bearing in mind that the top should be at least 6" above the highest terrain around the pool area (20' radius). This height dimension ** (Bench Mark) should be marked near the construction site (side of house, tree, etc.).

Use a transit to determine this dimension (benchmark). The transit should be set 10' to 15' from the pool site with an unobstructed view of the entire site. Remember, there must be access for excavation equipment and room around the excavation for soil to be piled. Refer to the installation drawings for all dimensions.

For rectangular pools, position a stake in each of the four corners. Check for equal diagonal measurements to insure that the layout is square. For special shape pools, refer to the installation drawings.

Connect string to these stakes and outline the ground (under the string) with chalk or white spray paint. The next step is to mark dimensions on the "Reference Pole." (To make a reference pole, take two pieces of wood, 2" x 3" x 8' long and nail them together lengthwise, with an overlap of approximately two feet.)

MARKING REFERENCE POLE

1. Rest the bottom of the pole on your "benchmark". Holding the pole vertical, have another person sight the level cross hair (in the transit) on the "Reference Pole" and label this point "Top of Pool".
2. Next, lay the pole down and measure from the label (top of pool) up 44 1/2" for concrete receptor coping. Mark this shallow end depth. (Standard panel height is 42").
3. Measure up beyond the point labeled "Top of Pool", the deep end depth depending on the style of pool being installed (refer to installation drawings.) Make a mark at this measured point and label this point "deep end depth".

NOTE: Problem to consider--If, in laying out your pool, you find an elevation such as a hill located in close proximity to where the pool will be installed, you should have the excavator dig back approximately 6' from the pool, into the existing hill or elevation. A retaining wall should then be built to hold the soil back, and a drain should be installed, to divert run-off away from the pool.

**Bench Mark - The bench mark is the final height of the pool deck, usually 2 1/2" (when using standard coping) above the finish height of the top of the pool wall/bead receiver for the liner. (The bench mark may change due to deck forms or coping bricks).

SUGGESTED WATER PROBLEM PROCEDURE

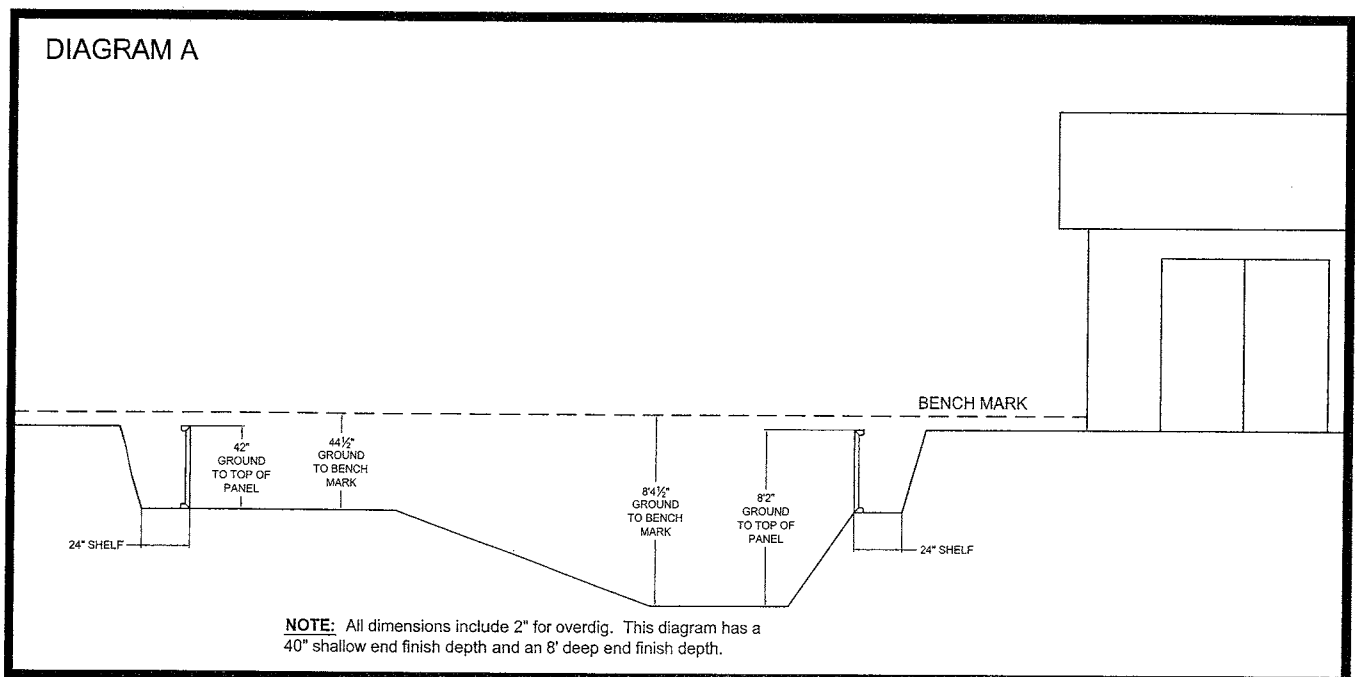
When water is encountered in the ground during excavation of the pool, the following procedure will enable you to divert this water temporarily and keep the area dry during construction. Once the installation is complete, ground water will not disturb the pool because the internal hydrostatic pressure of the pool water is greater than that of the water beneath the pool. It is also advisable to install a hard bottom instead of a sand bottom, thereby eliminating the possibility of a wash-out of the pool base.

1. Over-dig hopper bottom one to two feet and place #2 crushed stone four to six yards depending on size of pool and severity of water problem.)
2. If water is erupting from other areas such as the slopes or breakover, over dig these areas and place stone so that the water will drain to the hopper bottom. (Note: Be sure to dig enough to allow for the addition of two inches of pool base.)
3. Next, get enough length of pipe (1 1/2" diameter), so that you will be able to imbed one end into the stone in the hopper, while imbedding and running the rest of the pipe up the slope and under the panels to ground level. *Note: Be sure the pipe end is located at the bottom of the stone bed.* Install a 1 1/2" foot valve at the end of the pipe to be inserted into the stone. This will provide a screen and check valve.
4. Connect the pipe to a low head electric pump and leave the discharge line slightly elevated, so as not to lose prime. Turn it on and *leave it running until the pool is finished and is filled with water.* Cap off the line and leave it for future use in liner replacement.

POOL EXCAVATION

Note: Remember that the pool will be dug 2 feet larger on all sides than its original dimensions. This allows room for erecting panels and placement of A-frames. Instruct your backhoe operator to excavate the width of his bucket (approximately 24") on the outside of the pool layout, to accommodate for this area. You may also outline this area with spray paint.

Explain to the backhoe operator that the 24" shelf is located 44 1/2" below the bench mark (42" -height of the steel panels plus 2 1/2" -height of the receptor coping. **Refer to Diagram A.**



INITIAL EXCAVATION

Excavation can be accomplished by digging the entire shape of the pool to its shallow bottom depth from outside the pool. It also can be accomplished by starting at one end and working from the inside out. Either method is acceptable, **providing the digging is done accurately.**

Using the reference pole, dig an area down to the mark labeled "shallow bottom depth". Haul away excess soil.

FINAL POOL LAYOUT AND EXCAVATION

Re-stake the pool shape using rebar, moving in 24" from the excavation.

Attach mason line to rebar. With the reference pole, check the corners next to the steel stakes and have someone sight through the transit to the mark labeled "shallow bottom depth". Check every 4' around the mason line with the reference pole to be sure that the mark on the pole meets the cross hairs on the transit. This area must be completely level. **If the area is too low, always work from undisturbed ground and raise area with the use of the patio blocks.**

FORMATION OF THE POOL BOTTOM

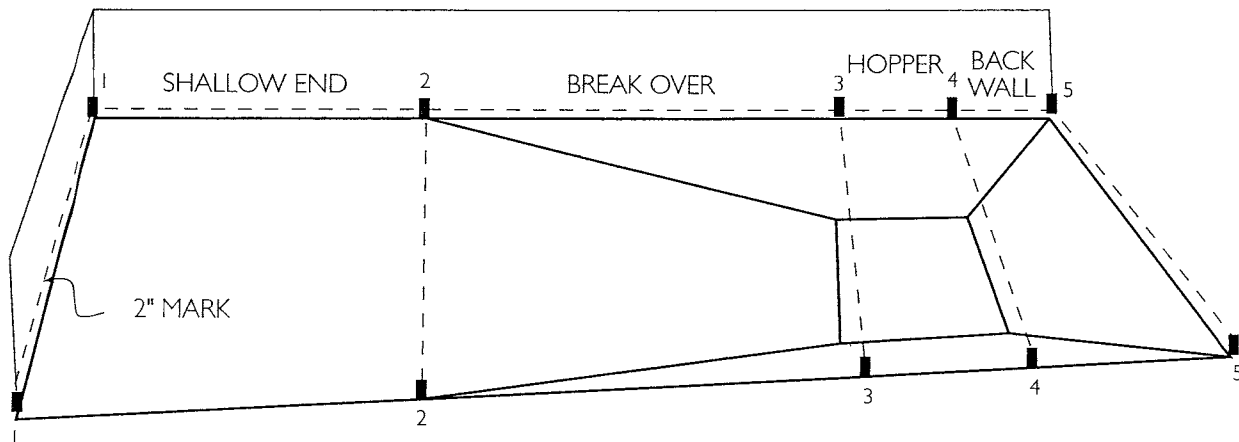
Refer to the installation drawings for your particular pool measurements. Place a line 2" from the bottom of each panel. This 2" mark represents the finished height of the pool bottom.

Using this format and the diagram below, insert the appropriate dimensions from your installation drawings.

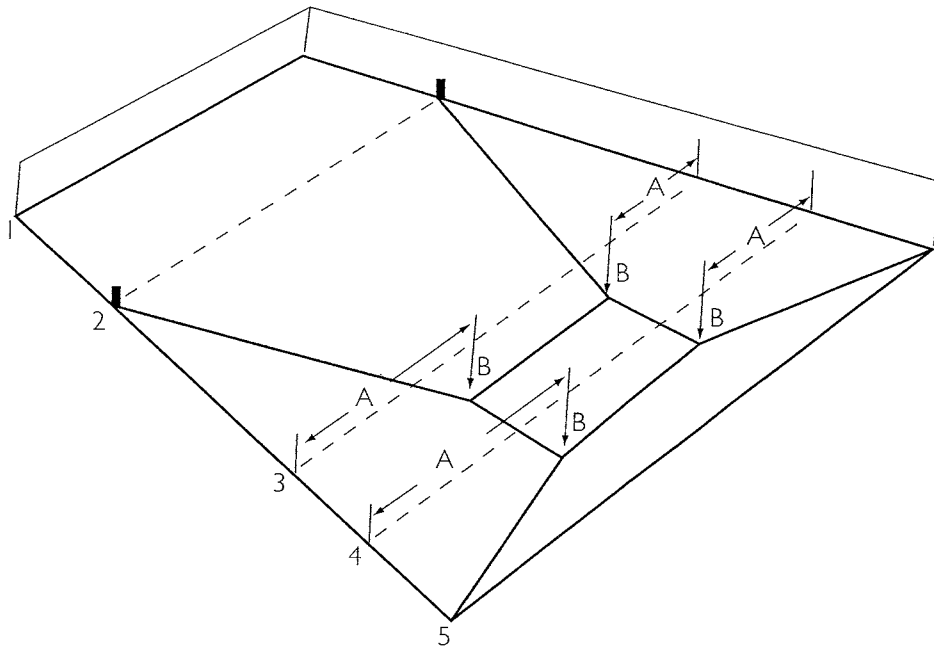
- Length of shallow end pins 1 to 2
- Length of hopper pins 3 to 4
- Width of hopper side walls A
- Length of breakover pins 2 to 3
- Length of back wall pins 4 to 5
- Depth of hopper minus steel wall B

Measure along side wall (at the 2" line). Install pins 2,3,4, and 5.

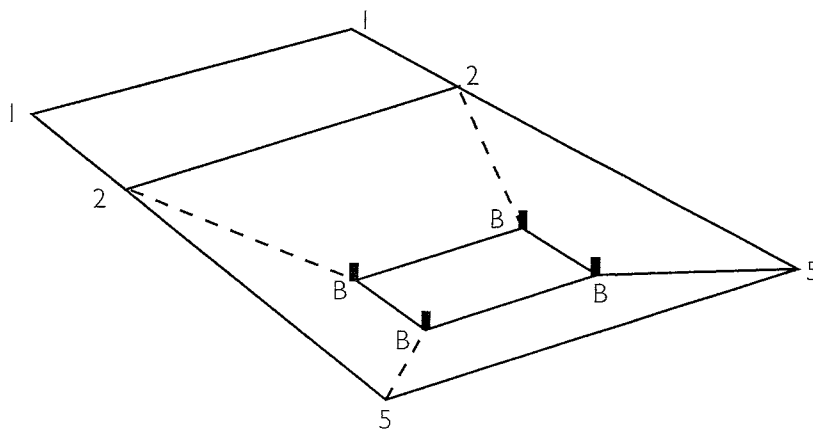
Tie 3 strings across at pins 2, 3 and 4.



On strings 3 and 4 measure in from side wall (Width of hopper side A). Drop a plum line down (Depth of hopper less steel side wall B).



Place 4 pins at B's. Tie one string from B to pin 5 and one string from pin 2 to B. Repeat on opposite side.



Remember--The rough grade is 2" below the string. Make sure the rough grade is free and clear from any sharp objects.

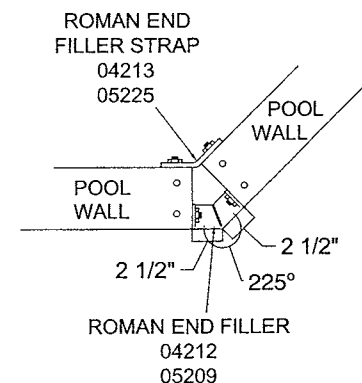
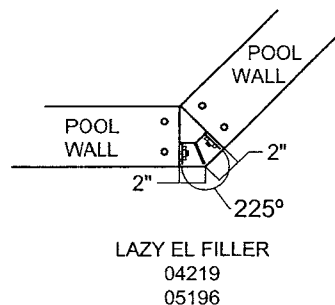
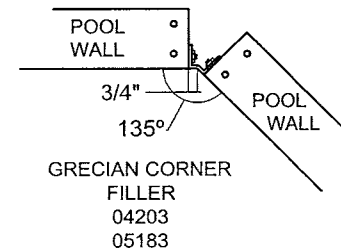
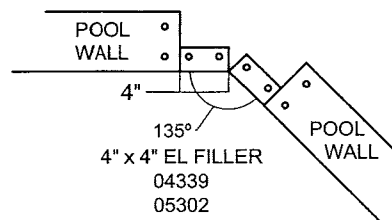
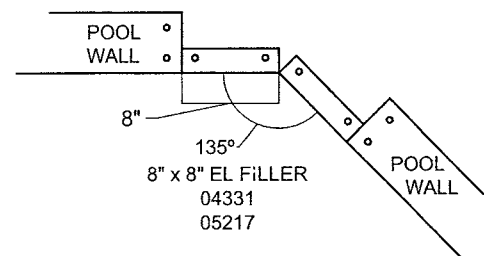
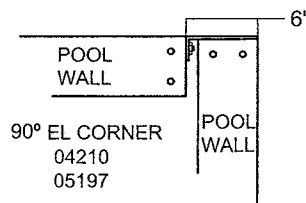
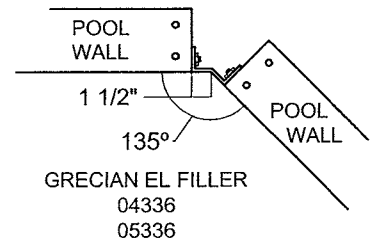
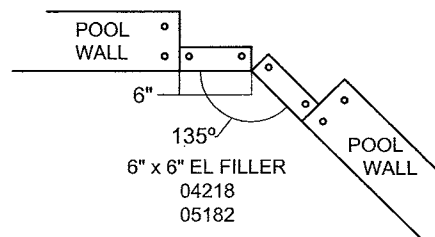
PANEL ASSEMBLY

Before erecting the walls, locate the position of the skimmer, return, and light panels, where applicable. Place the skimmer(s) facing the prevailing winds. Then locate the return panels to provide complete water flow around the pool.

When you have determined the location of the special panels, lay them on the ground near their respective locations. Refer to the installation drawings for the proper panel placement for the particular pool being installed.

Start at the deep end corner and attach the appropriate corner filler between two panels using the 3/8" x 3/4" hex bolts and nuts.

Continue bolting the rest of the panels together, forming the pool walls. Leave out the nuts and bolts at the top and bottom of the panel. This will be used for A-frame attachment.



STEP PLACEMENT

TRIM LINE COLLAR STEPS: Set step unit between two panels. Adjust height of step by aligning top of coping with top of step (Figure #1) **{See Caution}** and plumb by checking front face of step unit with adjoining panels.

NOTE: Step is universal in height to most coping designs (Bull nose, Flat, etc.) in the pool industry. To help with height variance, step comes complete with 4 Styrofoam blocks if needed. These blocks will fill any void between the coping and the step nosing that may appear when lowering the step. (Some cutting of the Styrofoam may be required for a perfect fit.) (See Figure #2)

CANTILEVER STEPS: Set step unit between two panels. Adjust height of step by aligning top flange of panel with top collar of step (Figure #3) and plumb by checking front of step unit with adjoining panels. Failure to do this could result with pool having insufficient water level on top step.

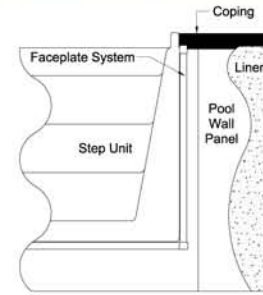
Lock Step unit in place with vice grip pliers.

Using holes in the panel as a template, drill holes through flange into step and bolt in place with a brace on each side of step unit.

Pour concrete bond beam around pool and step unit. Slope bond beam away from step to ensure proper drainage.

Backfill behind steps at least 2' before liner installation. Backfilling should be done with sand (NEVER CLAY), and thoroughly compacted in layers. When finishing pool base in front of step unit, taper it up, and make a slight cove. This will help to relieve any excessive pressure on pool liner. (See Figure #4)

FIGURE 1



NOTE: A small piece of coping can be used as a measuring guide when placed on the top of the panel.

FIGURE 2

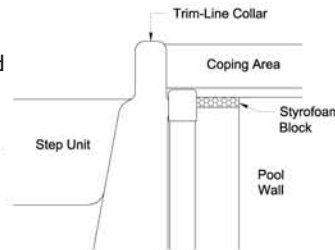
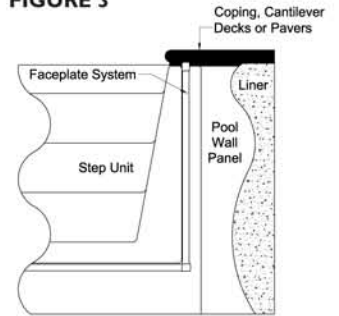


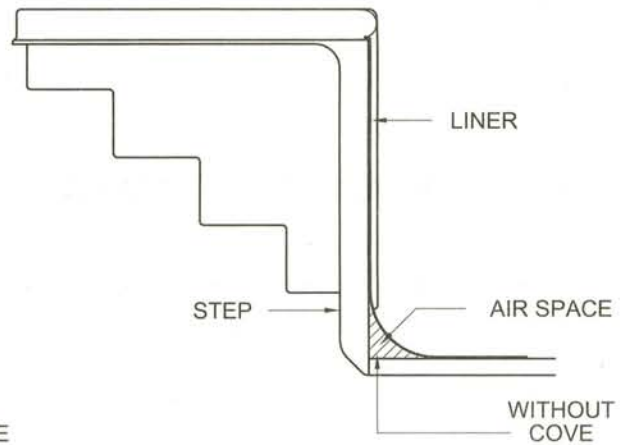
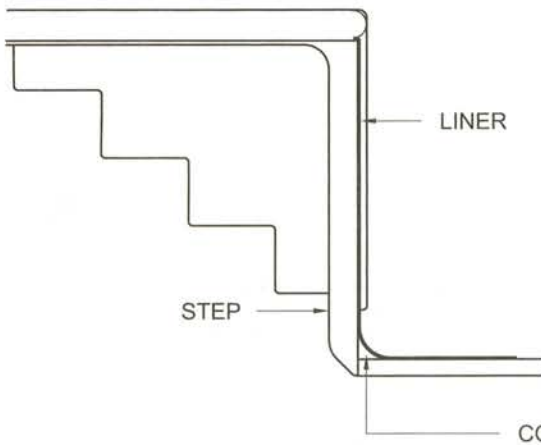
FIGURE 3



CORRECT

INCORRECT

FIGURE 4



CAUTION

For correct result (photo B), when connecting panel to step, adjust step height to meet top of coping (photo A). Failure to do so will result in an incorrect installation (photo C).

CORRECT PHOTO A



CORRECT PHOTO B

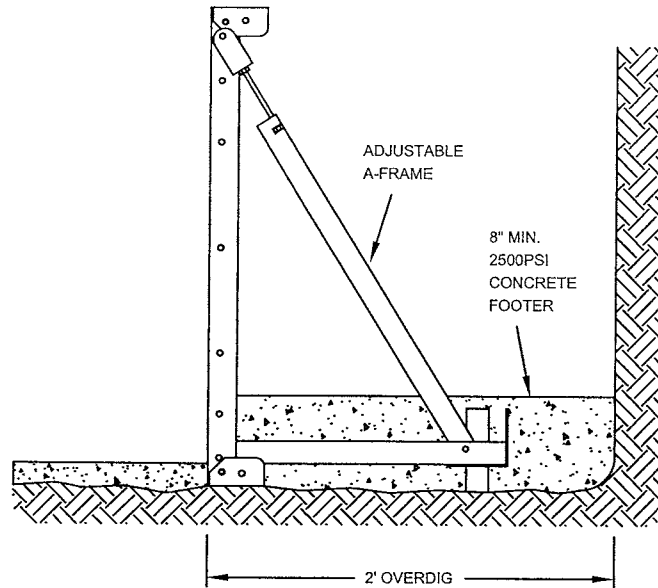


INCORRECT PHOTO C



A-FRAME INSTALLATION

Assemble A-Frame as pictured below, and attach at straight plane panel joints with 3/8" x 1" hex bolts and nuts.



Check for plumb of panels by stretching a string the length of the pool near the bottom of panels. Bring the bottom of the panels in or out to rest against the string. (Refer to the finished pool width on the installation drawings.) Anchor the bottom of all panels with 3/8" rebar.

Next, repeat the process along the top of the panels and adjust panels to rest against the string with the aid of the A-frames. Anchor A-frames with stakes.

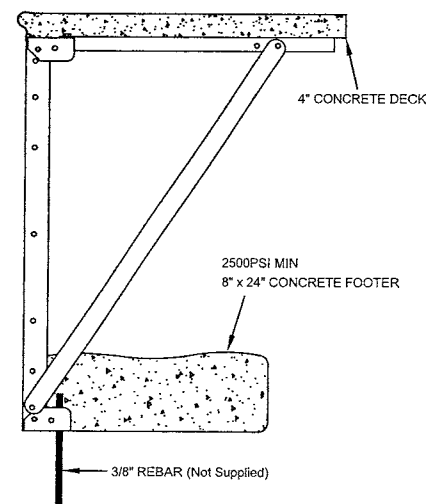
Follow the same procedure for the width of the pool.

INSTALLATION OF DECK SUPPORT SYSTEM (Optional)

One method of providing additional support for the concrete deck around the pool is the use of a deck support system.

This system of support is located every four feet around the pool perimeter.

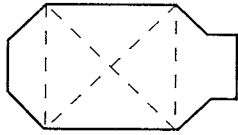
NOTE: When installing Deck Support, Panels are not Reversible. Be sure Panels are in the Upright Position for Deck Support attachment.



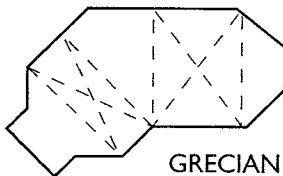
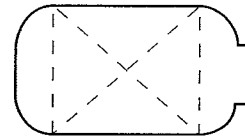
SQUARING THE POOL

With panels completely assembled, square your pool by measuring diagonals until each is equal.* Check with current Pool Specifications booklet for diagonal measurements.

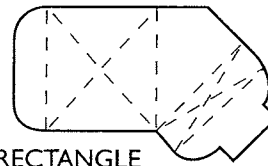
GRECIAN



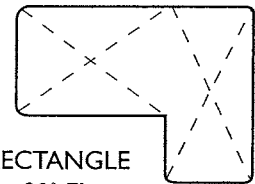
RECTANGLE



GRECIAN
LAZY EL

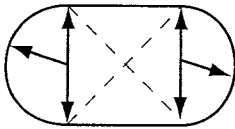


RECTANGLE
LAZY EL



RECTANGLE
90° EL

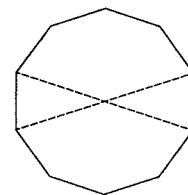
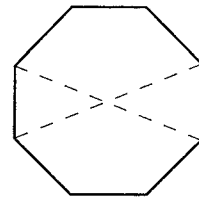
OVAL



On Oval shaped pools - The straight walls are to be parallel with each other. Diagonal measurements should be equal. Recheck the radius on both ends after attaining equal diagonals.

*Be sure to square the 4' x 8' walk-in-stairs.

PATIO



LEVELING THE POOL

With the use of a transit, place the reference pole on the top of the panels and take a reading at each corner (include the walk-in-stairs). Determine the highest elevation. Raise the pool corners to this elevation with the aid of a patio block. **Do not raise the panels by the addition of soil under the panels.** Continue to check for level at each panel joint and adjust accordingly.

The entire pool including the walk-in-stairs must be level.

MAIN DRAIN INSTALLATION (Optional)

Locate the position of main drain in the center of the hopper bottom. Begin by digging a hole approximately 18" in diameter and 24" deep. (Now take the main drain assembly and install the collector pipe and plug or hydrostatic relief valve with plastic pipe sealant.) Optional when high water table exists.

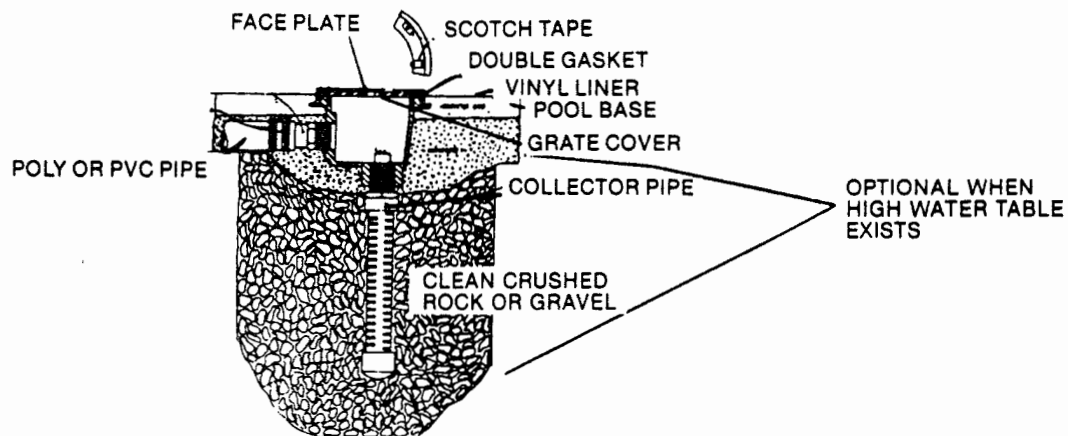
Cover all the screw holes in the face of the drain body with thin scotch tape to keep dirt out of the holes. By using thin tape, you will be able to complete the installation without removing the tape.

Fill the hole with crushed stone as shown in the diagram. Level the top surface of the drain body at the proper elevation of the finished base on the hopper bottom. Now install PVC pipe to the side fitting. Make certain the pipe lies flat and is properly trenched below the surface of the finished bottom until it is outside of the pool wall.

Fill the top of the hole with concrete, leveling the top of concrete to an elevation 2" below the surface of the main drain. This will allow for the proper thickness of the pool base.

Affix one gasket to the main drain with non-hardening gasket adhesive or duct tape.

The main drain is now ready for liner installation. The remaining face ring, cork gasket and cover can be installed after there is approximately 12" of water over the main drain upon filling the pool with water.



POURING CONCRETE COLLAR

A concrete collar must be poured around entire pool in 2' work area, approximately 8" deep. Make sure all panels are staked securely with rebar and that they do not move when pouring collar. A 2500 PSI mix of concrete or stronger is recommended.

While concrete is available, it is a good time to pour a pad for the filter system (4' x 4' or 4' x 8' if pool has a heater).

TAPING POOL INTERIOR

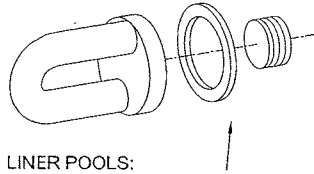
In order to secure an air tight fit when the liner is being set with an industrial vac, all interior seams where the steel walls are joined together should be taped with duct tape.

SAFETY ROPE INSTALLATION

A safety line with buoys is to be permanently attached 1' 0" to the shallow side of the point of first slope change.

Holes for eye hook must be drilled before liner is installed.

Coping mount hook is also available. (Refer to manufacturers' directions.)



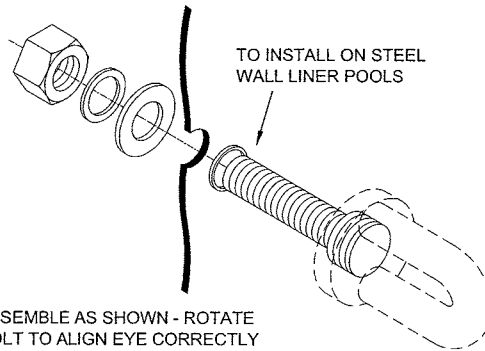
LINER POOLS:

AFTER LINER IS HUNG, CUT AROUND BOLT HEAD. PLACE LARGE WASHER ONTO HEAD AND THREAD EYE ON. IF EYE IS NOT ALIGNED, LOOSEN NUT AND ROTATE BOLT INTO CORRECT POSITION. TIGHTEN BOLT AND EYE.

COPING MOUNT HOOK

TEK SCREW

LINER SNAPS IN THIS GROOVE

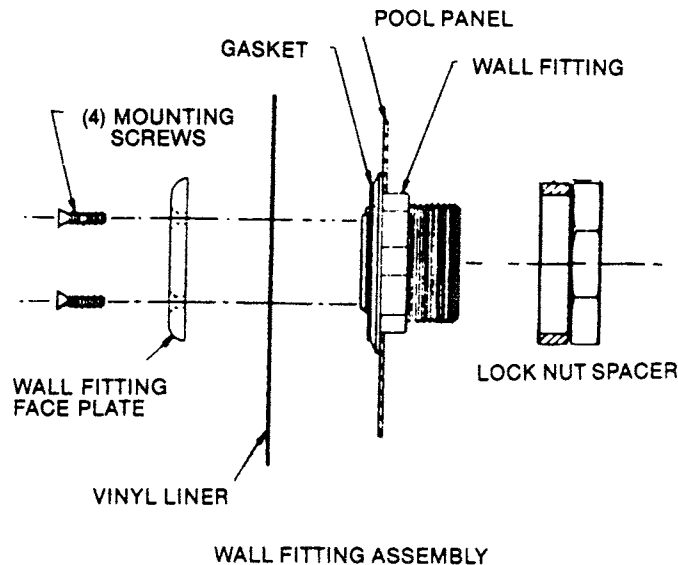


TO INSTALL ON STEEL WALL LINER POOLS

ASSEMBLE AS SHOWN - ROTATE BOLT TO ALIGN EYE CORRECTLY

INSTALLATION OF RETURN FITTINGS

Install wall fitting through hole in return panel and secure lock nut with pipe wrench. CAUTION: do not over-tighten fitting. Retain faceplate and screws for installation after pool is filled with water (refer to diagram below).



POOL PANEL

GASKET

WALL FITTING

(4) MOUNTING SCREWS

WALL FITTING FACE PLATE

LOCK NUT SPACER

VINYL LINER

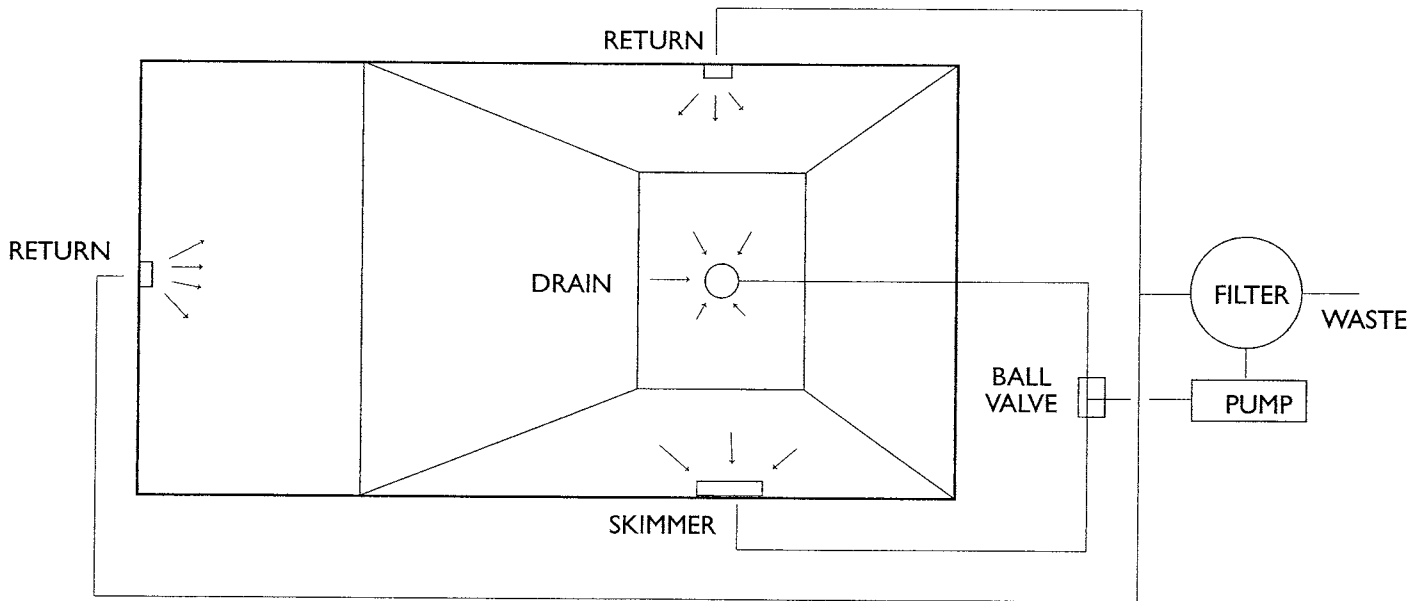
WALL FITTING ASSEMBLY

INSTALLATION OF POOL PLUMBING LINES

Apply a suitable plastic pipe sealant to the male adapter threads and hand tighten into fittings. Then tighten securely by rotating one full turn. Connect 1 1/2" PVC pipe (rigid or flex) to fitting with proper primer and glue. Run length of pipe to location of filter area. Cap and mark each line for future reference.

Rigid PVC pipe or flexible PVC pipe is a popular alternative. When using PVC pipe, be sure to use the proper glue as per manufacturer's instructions.

NOTE: Many installers prefer to imbed the plumbing in the concrete collar. Others prefer to lay the pipe on compacted soil around the pool. Either method is acceptable.



MATERIAL SELECTION FOR FINISHED POOL BASE

In forming your finished pool base, it is very important to make the right selection of base material conducive to your ground conditions, and also to the capabilities of your finishing crew. Below is a list of acceptable material used for the pool bottom. Select the one that is best for you.

MASON OR YELLOW SAND This type of sand is fine enough to provide a firm base for the liner. It must be tamped thoroughly, before troweling, to insure firmness. By spray misting water from a hose nozzle, it will compact and make it easier to trowel. Spray misting should be done periodically to keep the sand moist until the liner is installed. The disadvantage of sand as a pool base is that it will show depressions and indentations from usage. It also is not recommended in areas of high water tables.

FINE MASON SAND AND PORTLAND CEMENT A mixture of sand and cement provides a hard surface for the pool bottom eliminating the depressions found in bottoms with mason sand only. It is an acceptable base for the liner in unstable ground conditions (clay or high water table). It should be mixed thoroughly in a cement mixer at a ratio of 5 parts of mason sand to 1 part of Portland cement. You have the option of adding water to the sand and cement while it is mixing or applying a fine spray of water from a hose to the dry mixture after it has been placed in the pool. Periodic spraying of water should be applied to the pool base while troweling to keep it moist until the liner is installed. (Note--this mixture can also be ordered from a ready-mix company in order to eliminate hand mixing.)

CONCRETE A pool base consisting of a 4,000 lb mix (small stone, Portland cement and water) will provide a permanent bottom for your pool. There are, however, some factors that should be considered prior to selecting a concrete bottom. First, it is imperative that you have professional masons available to do the troweling. This type of mix sets up rather quickly and must be done correctly the first time. It is necessary to have a finish smooth enough so as not to harm the liner. Once the bottom has been finished, it is recommended that the entire area be checked for smoothness. Any sharp areas must be eliminated and then the whole bottom should be washed thoroughly before installing the liner. Of course, a main drain with a hydrostatic relief valve should be installed as part of this bottom.

VERMICULITE Another type of hard bottom material is referred to as Concrete pool base aggregate. This material provides a nonabrasive surface for the liner while providing a hard surface resisting the formation of pockets or foot prints. Mixed with water and Portland in a paddle type mixer, it should be applied according to the manufacturer's instructions. Because of its characteristics, it is recommended as an acceptable base in unstable ground conditions (clay, high water table). This type of base would be more expensive than the sand and cement mix.

CAUTION: When troweling vermiculite, do not try to attain a smooth surface. Too smooth a surface will cause the liner to slide.

TROWELING OF POOL BASE

Start in the hopper end and place the pool base of your choice on the slopes, in preparation to troweling up to the 2" mark on the panel bottom.

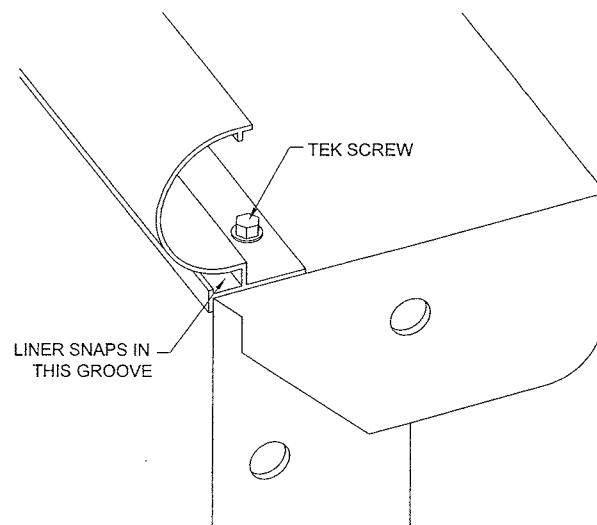
Once the slopes have been troweled, proceed to the shallow end and continue troweling.

Next, trowel the breakover, working to the bottom of the hopper. Finish troweling the bottom of the hopper and exit the pool.

INSTALLATION OF COPING

STANDARD COPING


All Standard CP2 Coping corners are pre fabricated. A 3/8" opening is acceptable as cap will cover all joints. This coping is affixed to the panel with Tek Screws every 12".



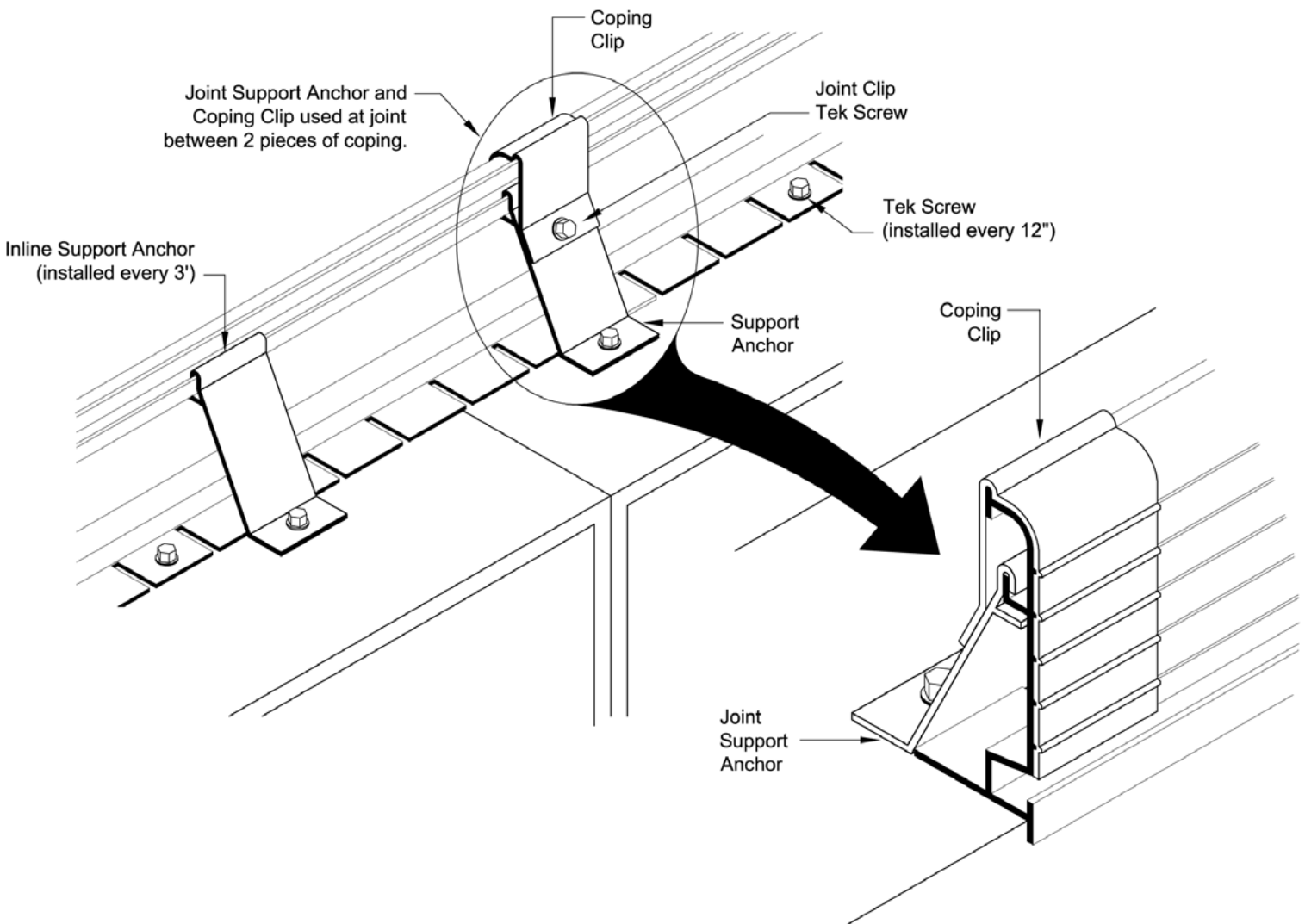
STANDARD COPING

FLEX COPING

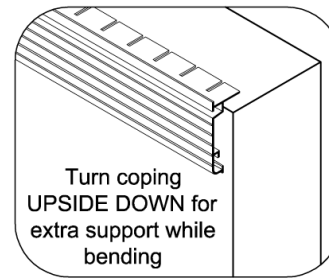
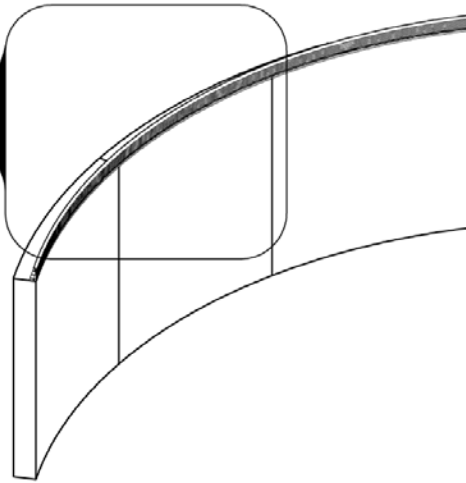
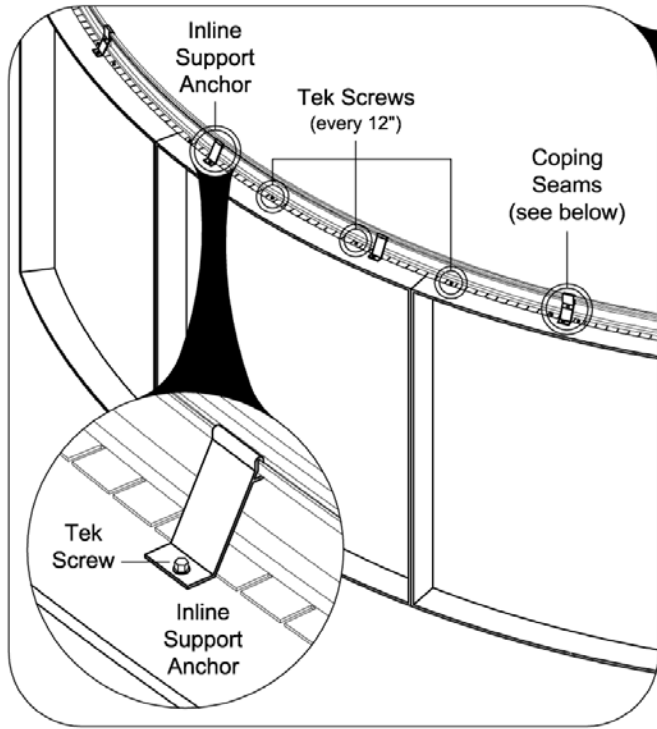
If pool is equipped with flexible coping, some bending on job site is required. Refer to Optional method to help with bending. Optional method allows for forming of correct radius by bending coping upside down using same radius on opposite side of pool. When you flip-over coping for correct profile, it has been formed for opposite side of pool. Note: Optional method will not work for every radius.



COPING CORNERS
*** Coping Corners will be packaged one of 3 ways:
#1 -- Pre-bent to the radius ordered
#2 -- Pre-mitered and held in place using the Extended Performance Adhesive System
#3 -- Straight sections that are pre-notched so they form to the corner that is needed. The piece will be bent by the installer on site. *(To avoid damage to the coping once the corner is bent, Do NOT bend the coping back into a straight section again.)*



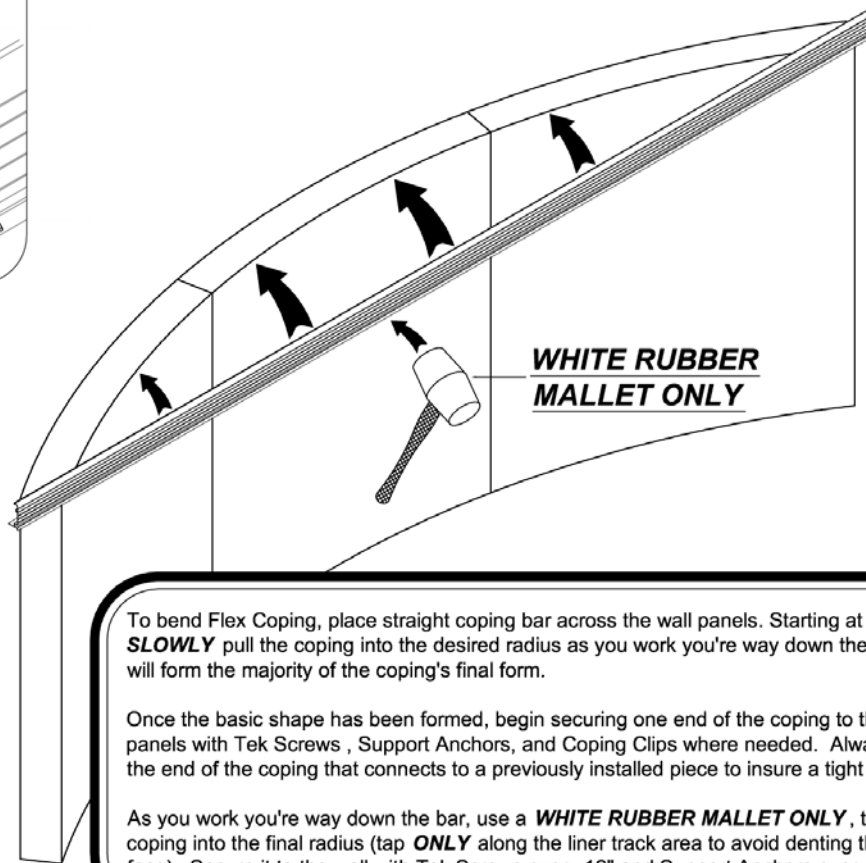
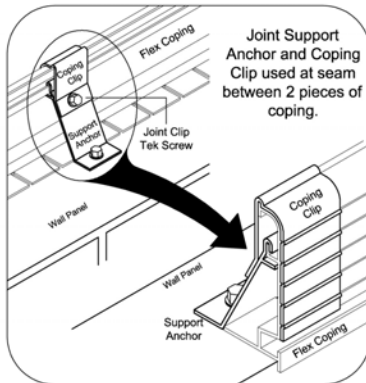
Rear View of Installed Coping Section



Optional Method

(can be used on wall sections with a single radius to form. For compound radius sections this method may NOT work)

Covering Coping Seams

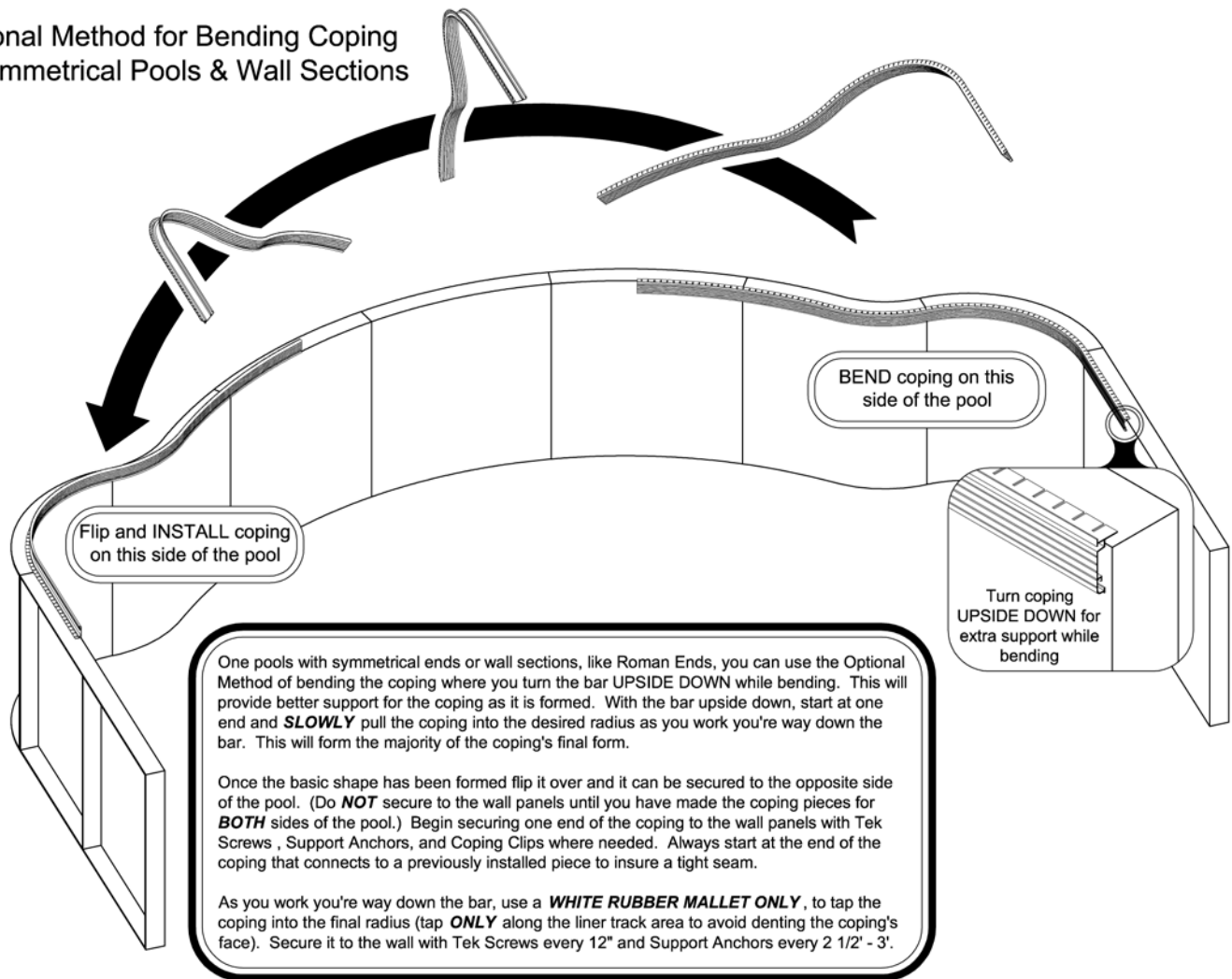


To bend Flex Coping, place straight coping bar across the wall panels. Starting at either end, **SLOWLY** pull the coping into the desired radius as you work you're way down the bar. This will form the majority of the coping's final form.

Once the basic shape has been formed, begin securing one end of the coping to the wall panels with Tek Screws , Support Anchors, and Coping Clips where needed. Always start at the end of the coping that connects to a previously installed piece to insure a tight seam.

As you work you're way down the bar, use a **WHITE RUBBER MALLET ONLY** , to tap the coping into the final radius (tap **ONLY** along the liner track area to avoid denting the coping's face). Secure it to the wall with Tek Screws every 12" and Support Anchors every 2 1/2' - 3'.

Optional Method for Bending Coping on Symmetrical Pools & Wall Sections



LINER INSTALLATION

Before installing the liner, make sure that the pool walls, pool bottom, coping, and general working area is clean and free of sharp materials that could snag or puncture your liner. Tape over any sharp edges on the pool coping.

Four people will be required for the installation of your liner.

1. Locate your industrial vacuum at the skimmer. Insert the suction hose into the skimmer from the cover, out the front, and down the pool wall to within 3" of the bottom. Tape around the skimmer cover opening to secure an airtight fit.
2. Place the liner at the deep end of the pool. Unfold as illustrated on the box.
3. While two people hold the liner on the coping at the deep end, two persons should begin to walk the liner to the shallow end.
4. Position the liner squarely in the pool. Each corner of the liner is marked on the back side.
5. Secure the liner in the shallow end first. Place the liner bead into the receptor extrusion along the shallow end wall, making sure the corners are in position.

6. Continue placing the liner bead into the extrusion, working along each side toward the deep end until the deep end corners are in place.
7. Be sure that the bottom corners in the shallow end of the pool are flush against the wall. Place the filled water tubes along the shallow end wall to hold the liner in position.
8. Shift the liner around the pool perimeter as required to position the corners correctly.

Final Positioning of the Liner

1. Turn the vacuum on and pull out any liner wrinkles and adjust the liner to match the pool bottom. Wrinkles can be removed by reaching over the wall and pulling on the liner sidewall material.

If necessary, turn the vacuum off to reposition the liner. Then turn it on again.

2. Once the liner is positioned properly and wrinkles have been removed, fill the pool with water.

If your pool has a main drain, install the face ring, gasket, and cover after there is approximately 12" of water in the deep end. Follow the manufacturer's instructions.

NOTE: Leave the vacuum in place and running until the water reaches a depth of at least 2" in the shallow end. If the vacuum is removed before the water reaches this point, the liner may slide toward the deep end, creating unsightly wrinkles and possibly causing damage to the liner. If the vacuum is shut off too soon, drain the pool immediately and reposition the liner.

3. When the water level reaches 2" in the shallow end, turn the vacuum off and remove it from the skimmer opening. Adjust the liner if necessary, then continue filling the pool to normal operating depth.

Installation of Faceplates for Skimmer, Return Fittings, Light, and Safety Rope

NOTE: Do not install the faceplates for the skimmer, return fittings, light, or safety rope until the water level is well over the fittings! If they are installed and cut in too soon, the liner may shift as it fills, causing it to tear at the fittings!

1. Position the faceplate over the fittings so that the holes line up.
2. With a pointed tool, penetrate the liner where each hole is and affix the faceplate with the self tapping screw provided with the fitting.
3. Cut out the opening with a razor knife.

INSTALLATION OF WALL FOAM

After taping the pool interior seams, wall foam may be applied to the steel wall, providing a cushion for the liner (just as padding provides a luxurious backing for carpeting). The wall foam comes in a roll 125' long, 42" wide and 1/8 of an inch thick.

It can be adhered to the steel with the use of a spray adhesive.

Start out by inserting a broom handle in the center of the roll. One person will guide the roll by leaning over the top of the wall, while another person inside the pool sprays the steel with the adhesive. Each person can then smooth the foam on the steel panel. Apply the adhesive per panel by spraying top, bottom and both sides of the panel first. Then spray an X in the center of the panel.

Place duct tape on all foam seams.

INSTALLATION OF LINER WITH THERMO-PLASTIC STEP

1. Remove faceplates from step unit. Notice the pre-drilled faceplates will have larger 3/8" holes at each end and in the middle. These larger holes will align themselves with pre-set dowels through the gasket and into the dead end block. Cut faceplates to correct length. (See Figure 1)

2. Before installing Liner, take a 4'x8' sheet of plywood and nail a 2"x4"x8' to plywood and screw a piece of extrusion to the 2"x4". Plywood conforms to step design. (See Figure 2)

3. Lay jig on top of step unit and tape around edge for a good seal for vacuum. (See Figure 3)

4. Install liner in normal manner, fitting liner at step area into the plastic extrusion.

5. Fill pool until water is approximately 4"-6" up on the front of the step unit.

6. Faceplate side pieces are marked **TL** (top left) and **TR** (top right). Left and Right are determined by facing the step from inside the pool. Starting with bottom horizontal faceplate in hand and with liner in place, find dowels with your finger and place corresponding 3/8" hole over this protrusion. Start in the center first then proceed to left or right side dowels. This will automatically line up all the rest of the pre-drilled screw holes.

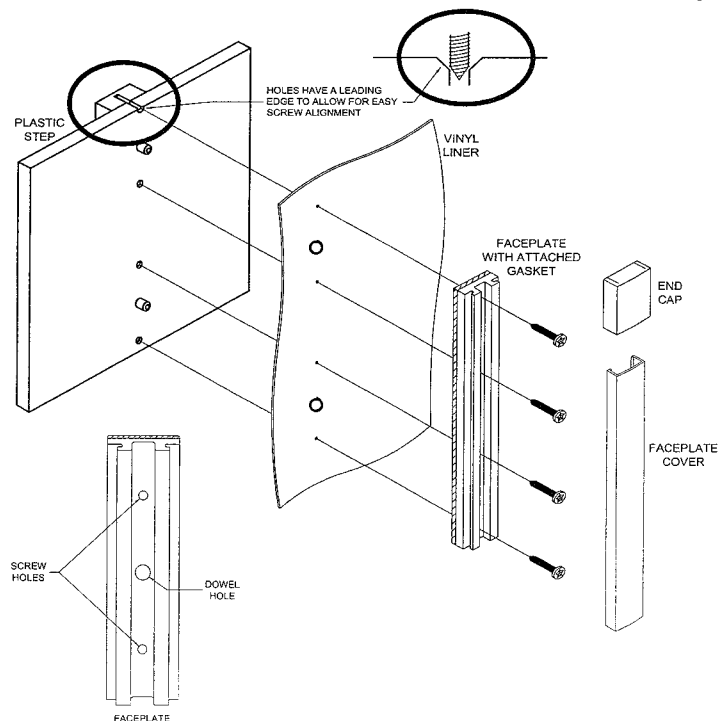
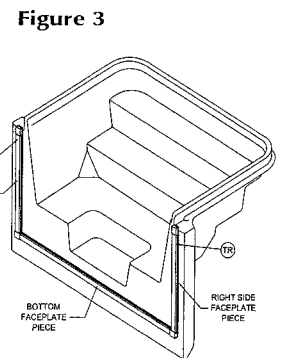
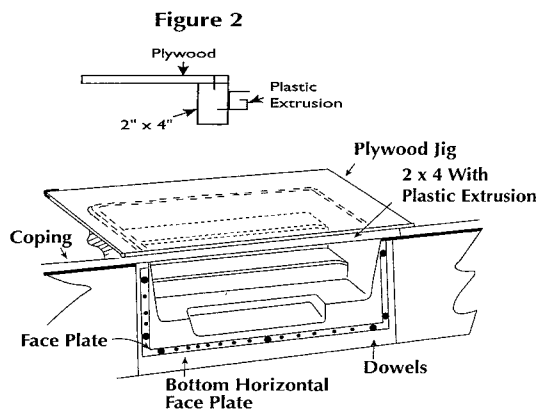
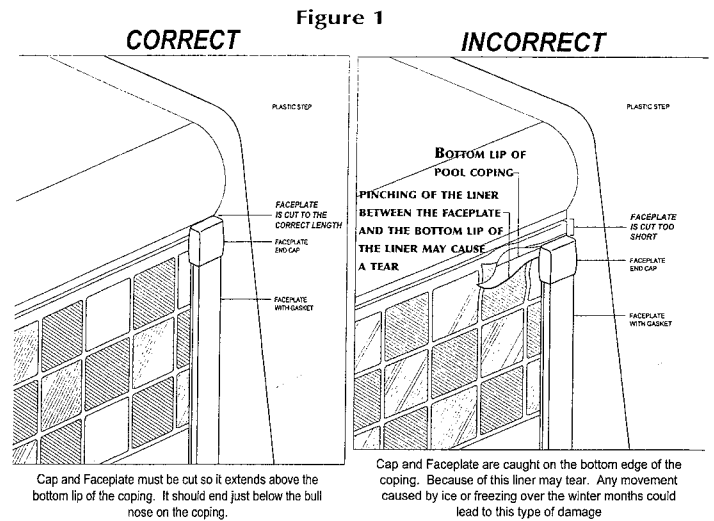
7. Using the T25 bit (Included) fasten screws in place starting with holes next to dowels, top and bottom or left and right to center.

8. Once all screws are in place, go back and hand tighten.

**(DO NOT OVERTIGHTEN
This can strip the dead end block.)**

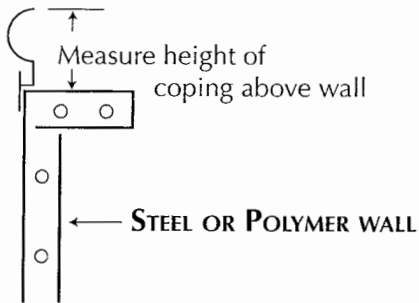
9. Once faceplate is installed, snap cover plate in place. Then slice liner in middle of step to relax material. Cut liner around *inside* of stepfaceplate. Remove liner from step. (Save liner section for possible patching material.)

10. Finish by placing end caps over top of faceplate at coping and at each end of bottom horizontal faceplate.

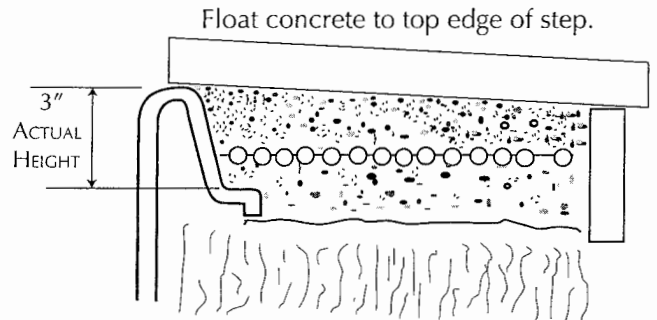


CONCRETE EDGING TIPS

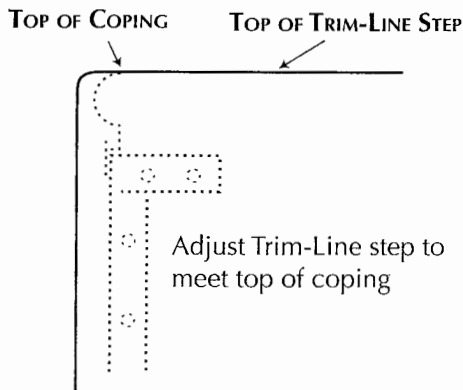
1



4



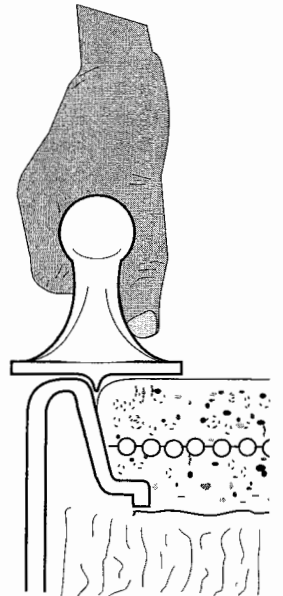
2



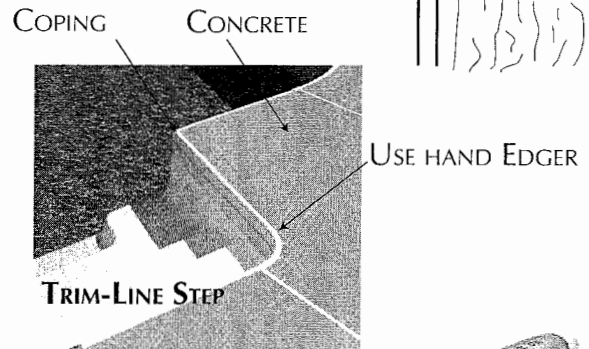
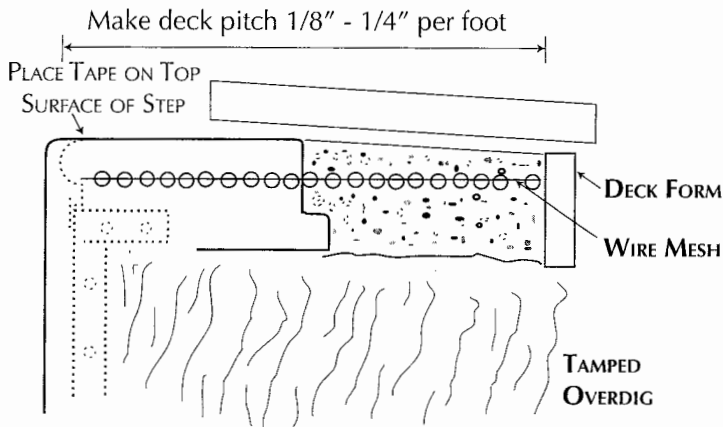
5

Remove tape slowly, then edge around the Trim-Line collar. Use a 1/4" edger. We suggest Kraft CF306 hand edger. It's fast, allows for a clean, neat edge and is easy to use.

Once the edge around the step has been rounded, trowel or broom finish to desired look. The result will be a clean, smooth deck surface with the look of continuous pool coping perimeter.



3



Recommended Tool



CF306

NOTE: White duct tape suggested making sure not to leave tape on step for any longer than necessary. Tape can actually "bake" on surface in direct sunlight making clean up difficult.

Concrete tips are for edging purposes only. Proper expansion joints, wire mesh and deck supports are the responsibility of the installer. Manufacturer accepts no responsibility for damage to the step caused by improper installation.

The edging tools shown may be purchased at your local hardware store or contact:
Kraft Tool Co. at 913-422-4848 or Fax: 913-422-1018

PRECISION **POOL**
PRODUCTS