

A&A CHANNEL FLOOR DRAIN

Single & Dual Suction Installation Instructions

Note to the Plumber:

With the A&A Channel Drain (a submerged fitting) it is necessary to run **only** one suction riser, per suction line, up through the floor of the pool. (Because the Channel Drain is an un-block able fitting, no other fitting is necessary.) This riser must be installed directly in the center of the pool, at its deepest point, and **instead** of installing a CAP on the top of the riser, for pressure testing, **the Channel Drain must be installed**. If a **hydrostatic valve** is required, see page 3 for plumbing details. The maximum flow rate of the Channel Drain, certified by the NSF, is 196 GPM (1.0ft/sec) for single suction & 227 GPM (1.1ft/sec) for dual suction drains. **Maximum flow rate for each model is not to be exceeded!**

SEE SEPARATE INSTRUCTIONS IF THE CHANNEL DRAIN IS GOING TO BE INSTALLED AS A SIDEWALL SUCTION OUTLET. NEVER INSTALL THE CHANNEL DRAIN IN A SEAT OR A BACKREST AREA!

1. Since the Channel Drain is to be installed at the plumbing stage, it is important that it is installed directly in the middle of the deepest point of the pool and that it is set at the proper height since it will determine the pool depth.
2. In order to ensure that the Channel Drain is set at the proper height, a string must be run across the pool from the top of the bond beam forms and directly over the lowest point in the pool where the drain riser will be located. (See Figure 1)
3. Plumb the main drain line to the riser but **don't** glue the riser into the 90° EL or the 90° EL onto the horizontal suction line until the length of the riser has been determined. (See Figure 2)
4. The top rim of the Channel Drain must be set so that the distance from the string to the top edge is: the Pool Depth + 3". Adding the 3" to the pool depth compensates for the fact that the actual water line will be 3" below the top of the bond beam form or middle of the 6" tile row.
5. It is recommended that the Channel Drain be plumbed with a minimum 3" suction line. Certified flow rates are based on 3" plumbing only.
6. Determine the suction line size that will be used on the current installation and select the method of determining the Height of the Channel Drain (see Figure 3).

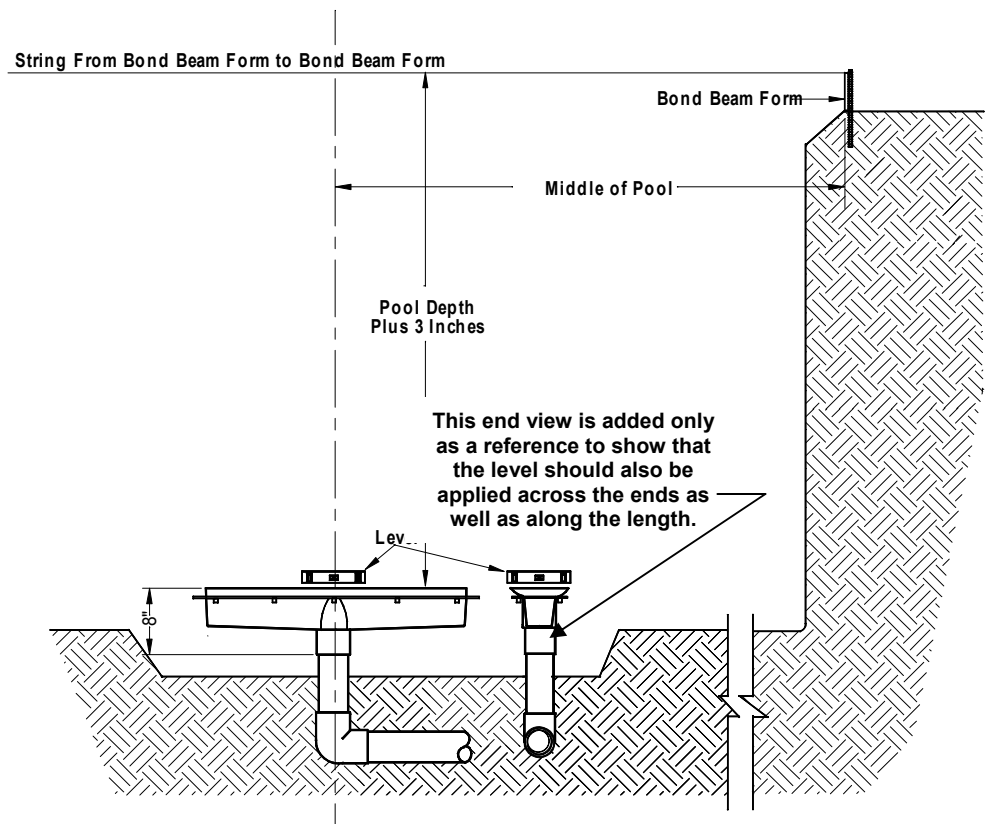


Figure 1

7. From the string, and directly over the center of the pool, measure down along the vertical riser and mark the cut-off point as described in Figure #3. If 2 1/2" suction lines are being used, the riser is cut off at a point equal to the Pool depth plus 9" down from the string. If 3" suction is being used, the cut-off point on the riser will be equal to the pool depth plus 11" down from the string.
8. Once the riser has been cut to the proper length, it may now be glued into the 90° EI and the EI glued to the suction line. Use a level to ensure that the riser is vertical on all sides.
9. The Channel Drain may now be be glued to the riser and using the string as a guide, make sure the unit is lined up with the string and 90° to the sides of the pool. (**NOTE: Use ABS to PVC cement**)
10. At this point, make certain that there is sufficient space excavated below the channel drain for steel installation and that dirt is packed tightly around the suction line.
11. The Channel Drain is now ready to be pressurized prior to shotcrete or gunite. A test plug is already installed (see Figure 7).

Steel and Gunite

12. The steel re-bar must be bent so that the steel basket drops below the channel drain and is formed so that it is half way between the bottom of the Channel Drain and the bottom of the trench (see Figure 4).
13. Make sure the plastic Construction Cover is secured in the Channel Drain to prevent concrete entering the drain sump (see Figure 5).

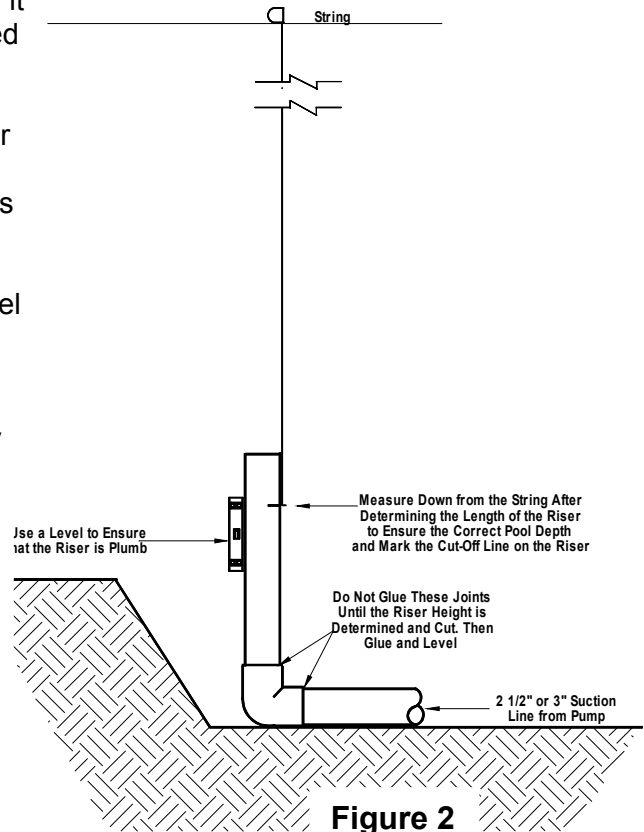
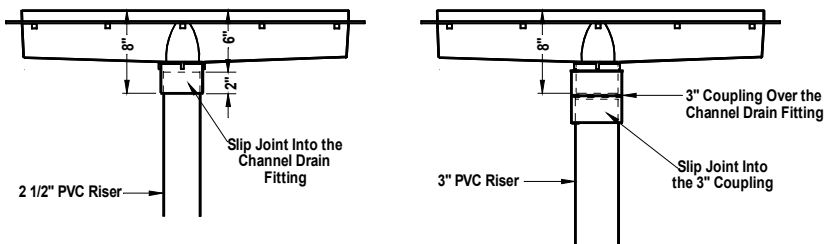


Figure 2



When Using 2 1/2" Suction Add 6" More to Determine the Riser Cut-Off Point (Pool Depth Plus 9" From the String)

When Using 3" Suction Add 8" More to Determine Riser Cut-Off Point (Pool Depth Plus 11" From the String)

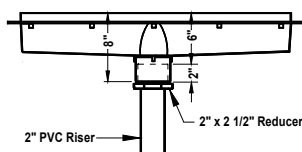


Figure 3

When Using 2" Suction, Add 5 1/2" More to Determine the Riser Cut-Off Point (Pool Depth Plus 8 1/2" From the String)

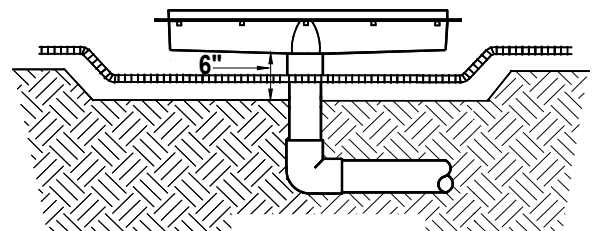


Figure 4

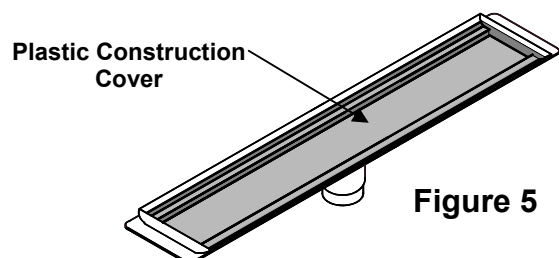


Figure 5

14. When the gunite or shotcrete is applied, pack the concrete tightly under the Channel Drain and finish the floor around the drain to 1/2" below the lip, then make a finger swipe under the water seal of the drain so that interior finish material can be applied under the lip of the water seal (see Figure 6).

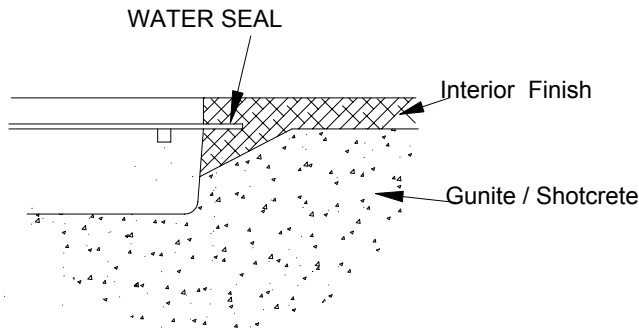


Figure 6

15. Before the finish (plaster, marcite, pebble, or other finish material) is applied, make certain that the plastic construction cover is still securely sealed and in place to prevent the finish material or slurry from entering the Channel Drain sump.
16. When applying the finish material around the Channel Drain, push the material up under and around the water seal then finish right up to the top lip of the channel drain.
17. **Immediately before filling the pool with water, remove the plastic Construction Cover from the Channel Drain.**
18. Remove the test plug from the bottom of the Channel Drain and glue in the Safety Shield with the supplied packet of glue (see Figures 7 and 8).
19. Install the top on the Channel Drain. Use **ONLY** the supplied Torx safety screws (screwdriver tips are included in the packet with the screws see Figure 11)

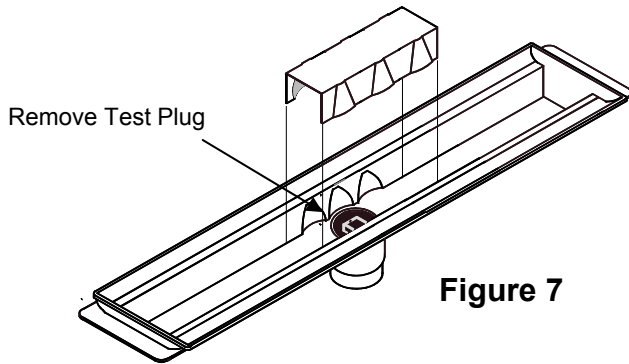


Figure 7

With the Supplied Packet of Glue, Secure the Safety Shield Into Place Letting It Snap Into Position

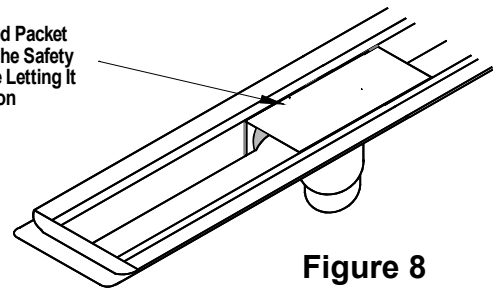


Figure 8

Hydrostatic Valve

If the Channel Drain requires a hydrostatic valve, install it in the provided hydrostatic valve fitting on the bottom of the Channel Drain (see Figure 9). It is recommended that the threaded hydrostatic relief valve collection tube be glued, and then threaded into the fitting. The Hydrostatic Relief Valve can then be threaded down into the fitting before the plate is installed.

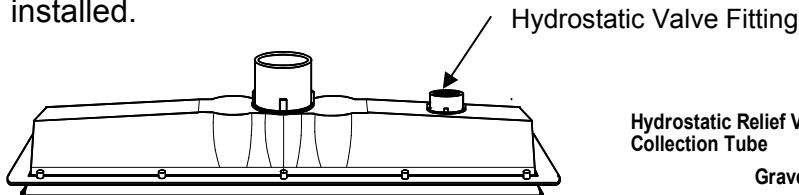


Figure 9

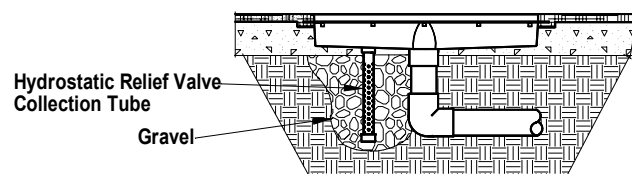


Figure 10

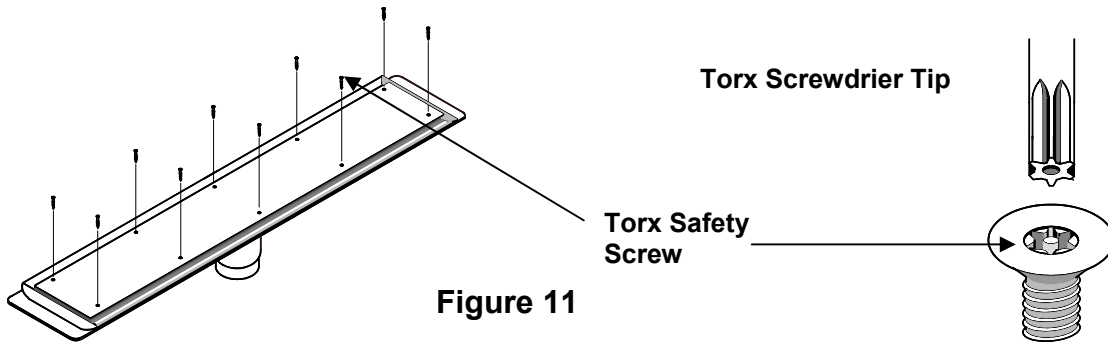


Figure 11

Installing the Dual Suction Channel Floor Drain

The Channel Drain may be configured to accommodate more than one pump by ordering from A&A Manufacturing an additional suction port on the bottom of the unit. If it is needed, a hydrostatic valve fitting can also be added to a dual suction Channel Drain (see Figure 12).

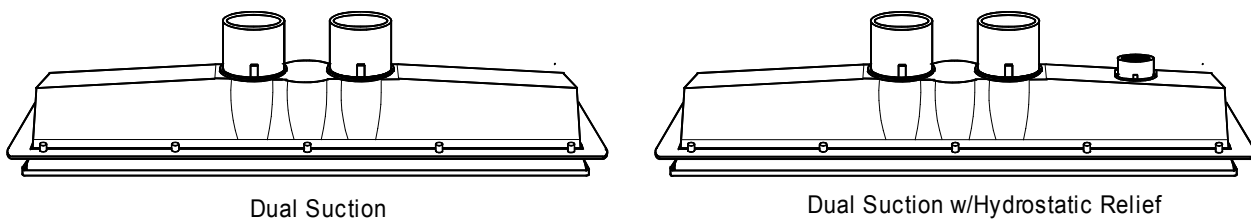


Figure 12

Installation and steel forming for the dual suction Channel Drain is identical to the single suction drain (see Figure 13). The maximum flow rate of the Floor Mounted Dual Suction Channel Drain, certified by the NSF, is 227 GPM. **Maximum flow rate is not to be exceeded!**

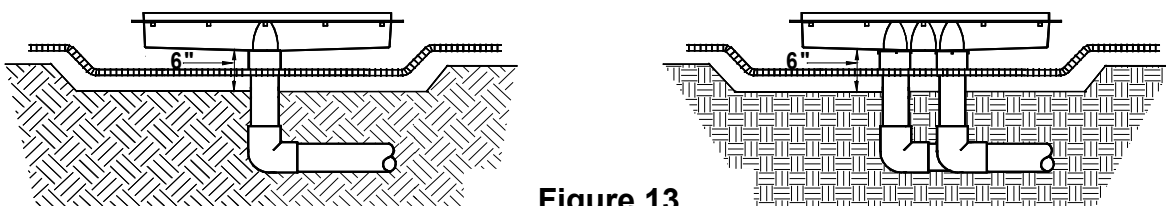
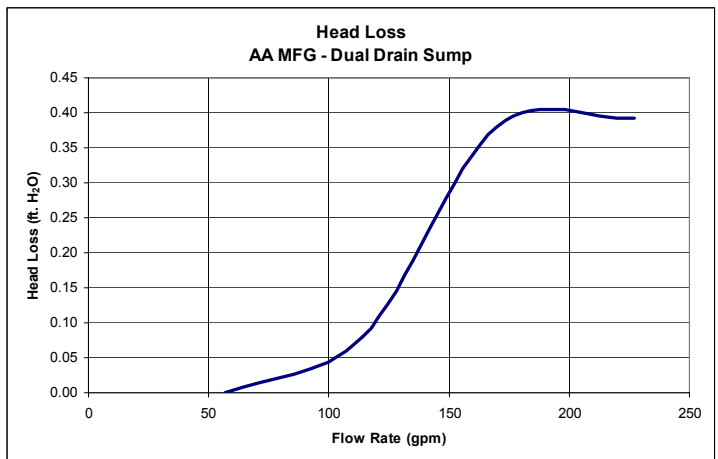
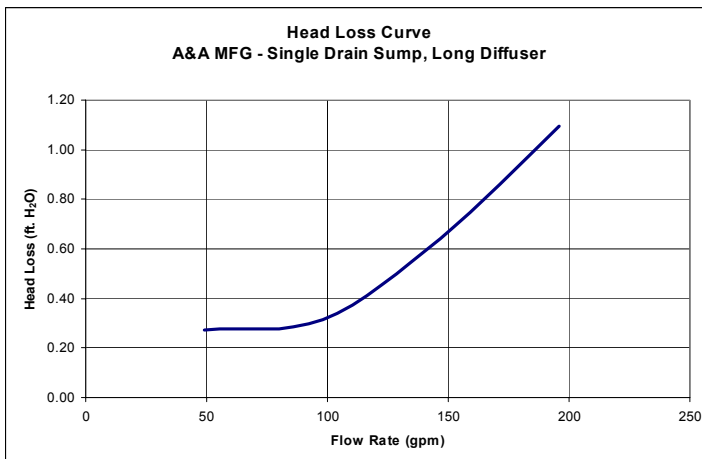


Figure 13



A&A CHANNEL WALL DRAIN (As Side-Wall Suction) Installation Instructions

Note to the Plumber:

With the A&A Channel Drain (a submerged fitting) it is necessary to run **only** one suction line, per pump, to the wall of the pool. (Because the Channel Drain is an “un-blockable” fitting, no other fitting is necessary.) The Channel Drain **must be installed vertically** in the wall. The Channel Drain contains its own internal pressure plug, and is installed at plumbing in place of a CAP on the line extending through the pool wall. The maximum flow rate of a wall mounted Channel Drain, certified by the NSF, is **184 GPM / 0.9 ft/sec.** (dual-suction) & **167 GPM / 0.8 ft/sec** (single suction). **Maximum flow rate /velocity is not to be exceeded!**
NEVER INSTALL THE CHANNEL DRAIN IN A SEAT OR A BACKREST AREA!

1. The side wall Channel Drain should be located in the wall at the deepest part of the pool and mid-way down that wall. The bottom of the 90° Ell that feeds the drain must be a minimum of 18 inches above the top of any cove (see Figure 1), and the upper edge of the drain sump must be placed at least 12 inches below the bond beam form.
2. Dig a niche down the wall of the pool at the desired location of the Channel Drain. The niche must be at least 12 inches wide and the back of the niche must be 12 inches to 14 inches from the final finish surface of the pool (see Figure 1).
3. To determine the correct depth of the niche, drop a plumb line 12" from the front of the bond beam form. This line will represent the gunite or shotcrete wall surface. (See Figure 1 that illustrates a plumb line tied to a rebar bent and extending over the bond beam form.)
4. It is recommended, that when plumbing the suction line down through the niche, you use 3" Schedule 40 PVC pipe. Use a level to assure that the vertical pipe is plumb both front and side. **Certified flow rates are based on 3" plumbing only.**
5. Install the Channel Drain so that the plumb line will pass along the flat water stop flange on the Channel Drain (see Figure 2). **SUGGESTION:** The parts should be “dry fitted” before gluing to assure that the proper positioning of the Channel Drain is achieved. (a.) The Channel Drain finishes along the plumb line assuring that it is at the proper depth (b.) The Channel Drain finishes level vertically and horizontally.

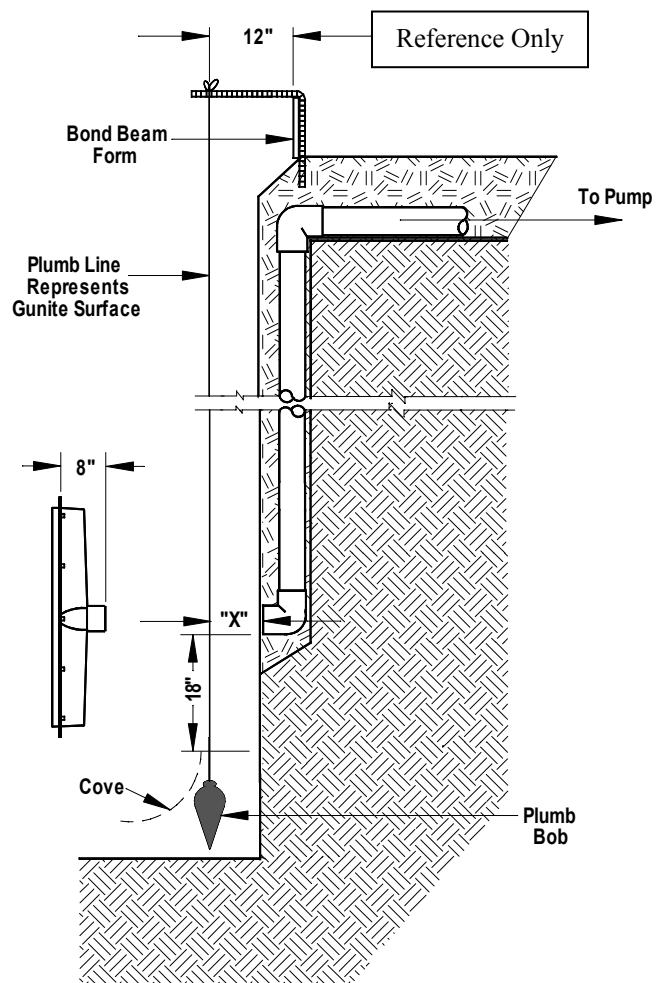


Figure 1

7. When it is determined that all the parts are the proper length and the Channel Drain will finish in the proper position, glue the parts in place. (**NOTE: Use ABS to PVC cement**)

Steel:

8. When installing the “steel basket” around and behind the Channel Drain, the rebar must be bent and formed so that the “basket” is behind and not touching the Channel Drain (see Figures 2 and 3).

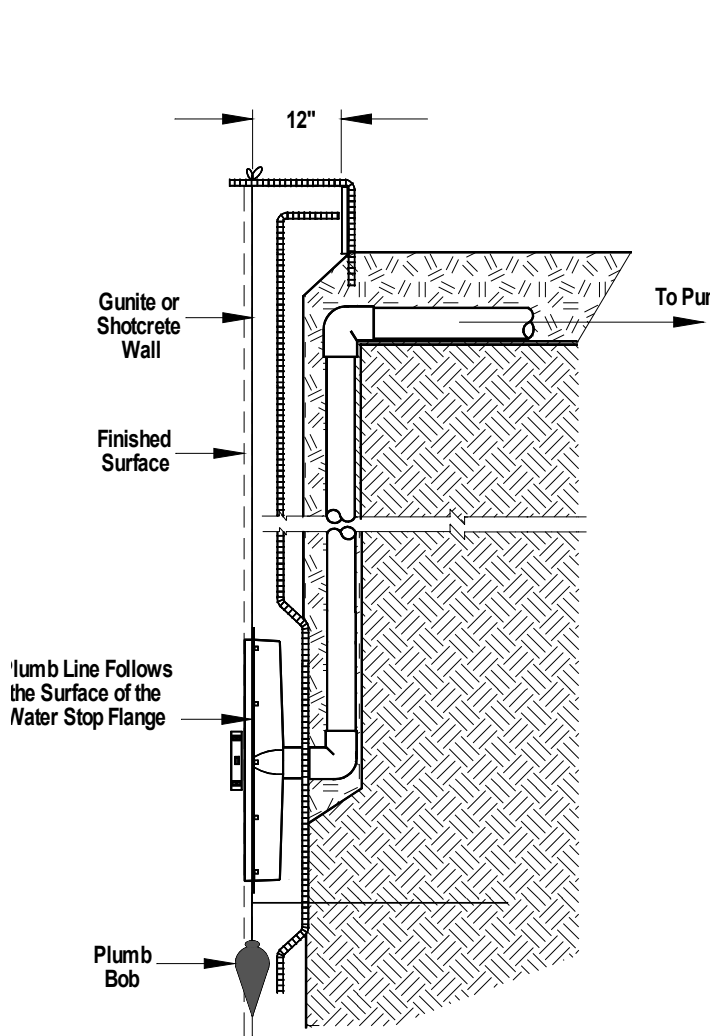


Figure 2

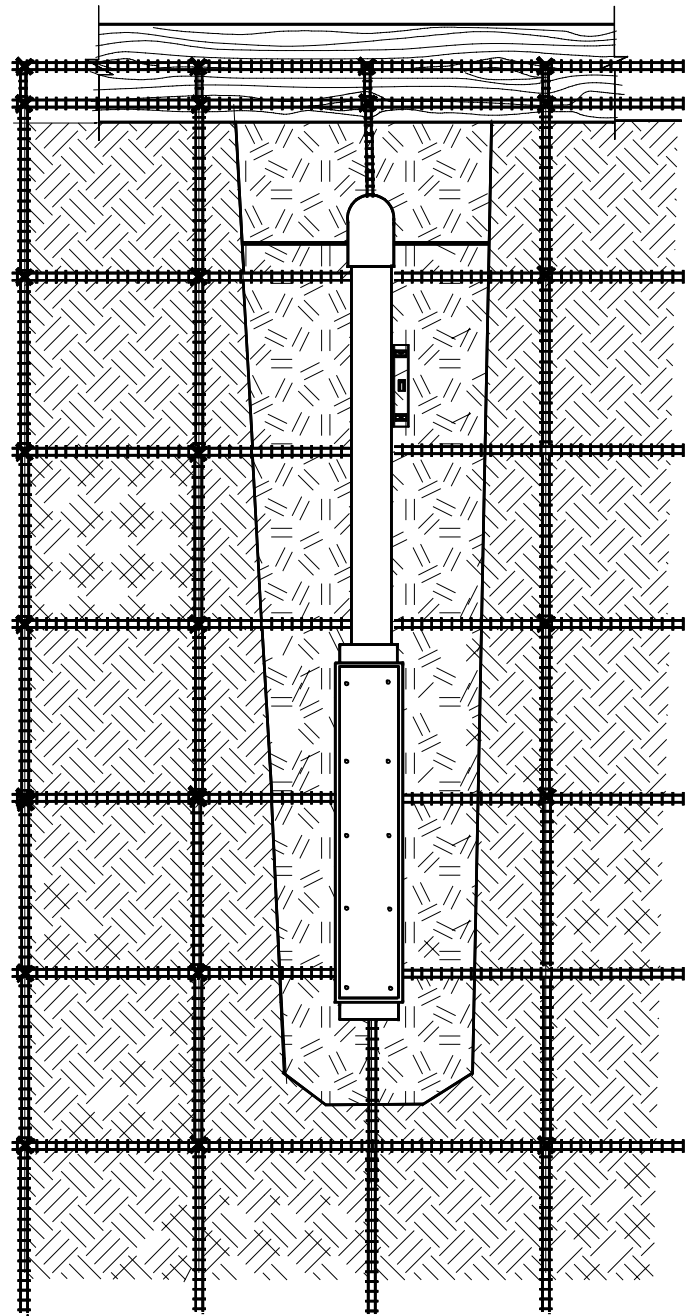
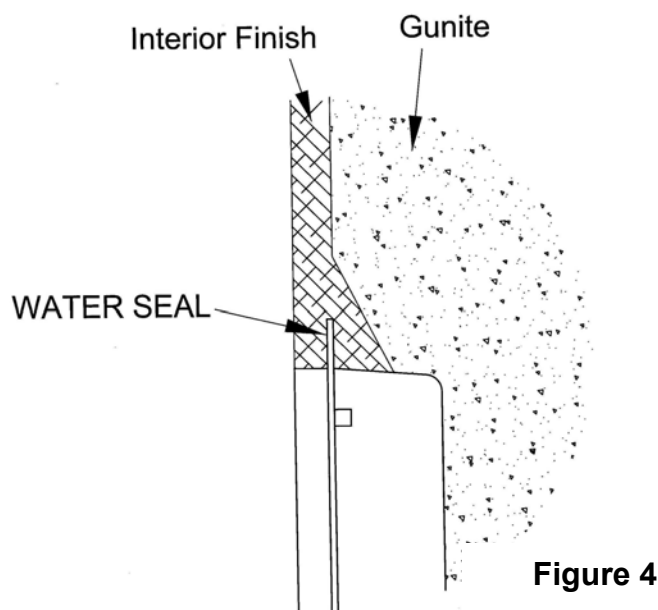


Figure 3

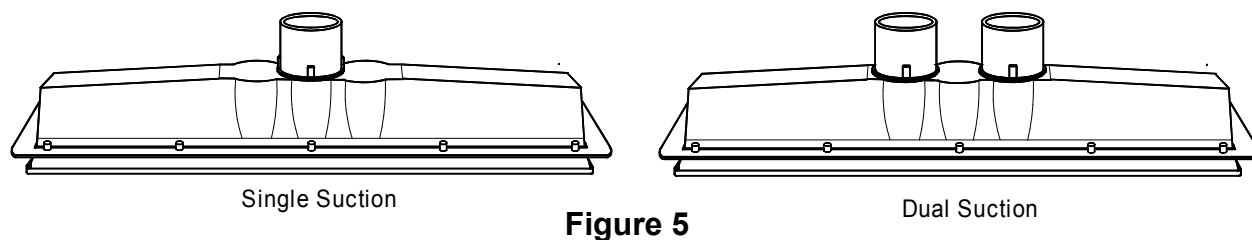
Shotcrete or Guniting:

9. Shoot or fill in the niche behind the Channel Drain when first starting to “shoot” the pool. Allow that material to cure for a while as you shoot other areas in the pool. Later, return to the Channel Drain and finish shooting and forming the concrete around the drain.
10. Pack the concrete tightly under the Channel Drain and finish the wall around the drain to 1/2” below the lip, then make a finger wipe under the water stop of the drain so that finish material can be applied under the lip of the water seal (see Figure 4).



Installing the Dual Suction Channel Wall Drain

The Channel Drain may be configured to accommodate more than one pump by ordering from A&A Manufacturing an additional suction port to the bottom of the unit (see Figure 5). Installation and steel forming for the dual suction Channel Drain is identical to the single suction drain (see Figure 2).



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A&A Channel Floor or Wall Drain

Homeowner Copy of ASME Compliance Instructions

Note to the Pool Builder:
 This page of ASME Compliance Instructions must be left with the Homeowner for filing and future reference.

Note to the Homeowner:
 These instructions must be read and retained in a permanent file for future reference of installation requirements and part numbers for immediate replacement of damaged, worn or aged parts.

WARNING: Do not exceed the maximum flow allowed by the NSF (find maximum flow allowed by NSF marked on Channel Drain top) for this fitting by adding pumps or increasing the horsepower of the existing pump or pumps

Periodically observe and inspect the Channel Floor or Wall Drain and its' fasteners for evidence of wear or tampering and immediately replace any part found defective before using again.

The following are part descriptions (see Figure A and Figure B) and part numbers for the A&A Channel Floor or Wall Drains:

Part Description	Color	Part Number	Life Span
Channel Drain Top	white	552892	7 years
“ “ “ “	gray	552509	“
“ “ “ “	black	556121	“
“ “ “ “	blue	556130	“
“ “ “ “	gold	556113	“
Drain Screws (316 SS)(Tamper proof)		558400	“
Torx Screwdriver (for Drain Screws)			

