

# Owners Guide

*Automatic cleaning and circulation systems*



A&A Manufacturing™





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# Welcome!

Congratulations on the purchase of your new swimming pool and thank you for choosing to include an A&A Cleaning and Circulation System, the finest automatic swimming pool cleaning and circulation system in the world.

We welcome you to our growing worldwide family of satisfied A&A system owners, and we appreciate the opportunity to serve you and your family.



# Your System

Since you worked with one of the premiere builders in your area, the most efficient A&A system was selected for your you. Although, the standard A&A systems presented below may not conform exactly to your system specifications, rest assured, your builder has customized one of them to fit your exact needs.

## QuikCirc

G4 Heads  
QuikSkim Ultra Skimmer  
AVSC Drain  
Wave Valve

## Top to Bottom, Top to Bottom Plus

G4 Heads  
V-fittings  
QuikSkim Skimmer  
AVSC drain  
LeafVac  
Wave Valve

## QuikClean, MagnaSweep, TurboClean

G4 Heads  
QuikSkim Skimmer  
AVSC drain or PDR2  
drains  
LeafVac  
Wave Valve

## QuikClean Xtreme, MagnaSweep Vforce, TurboClean Xtreme

G4V Heads  
QuikSkim Skimmer  
AVSC drain or PDR2  
drains  
LeafVac  
Wave Valve

## How Your In-floor System Works

1. Water returning to the pool passes through the Wave valve (Figure 1a) which is then directed to a specific zone, consisting of two or more in-floor cleaning heads (Figure 1b), causing them to lift up and clean the pool surfaces.
2. The in-floor cleaning heads:
  - Discharge a powerful stream of treated water across the floor, steps, benches and walls of your pool and spa, sweeping the surfaces clean.
  - Lift dirt and debris into suspension, allowing it to be removed by the main drain (Figure 1c) or skimmer (Figure 1d) where heavy leaves and debris is trapped by the LeafVac™ (Figure 1e).
3. As the lifted dirt and debris is caught by the LeafVac™ the fine particulates are thoroughly removed from the water by the filter, before returning it to the pool.
4. Next, the previously actuated cleaning heads return flush with the pool surface, while rotating to their next cleaning position.
5. The activation of the in-floor cleaning heads continues as long as the pool filtration system is operating.

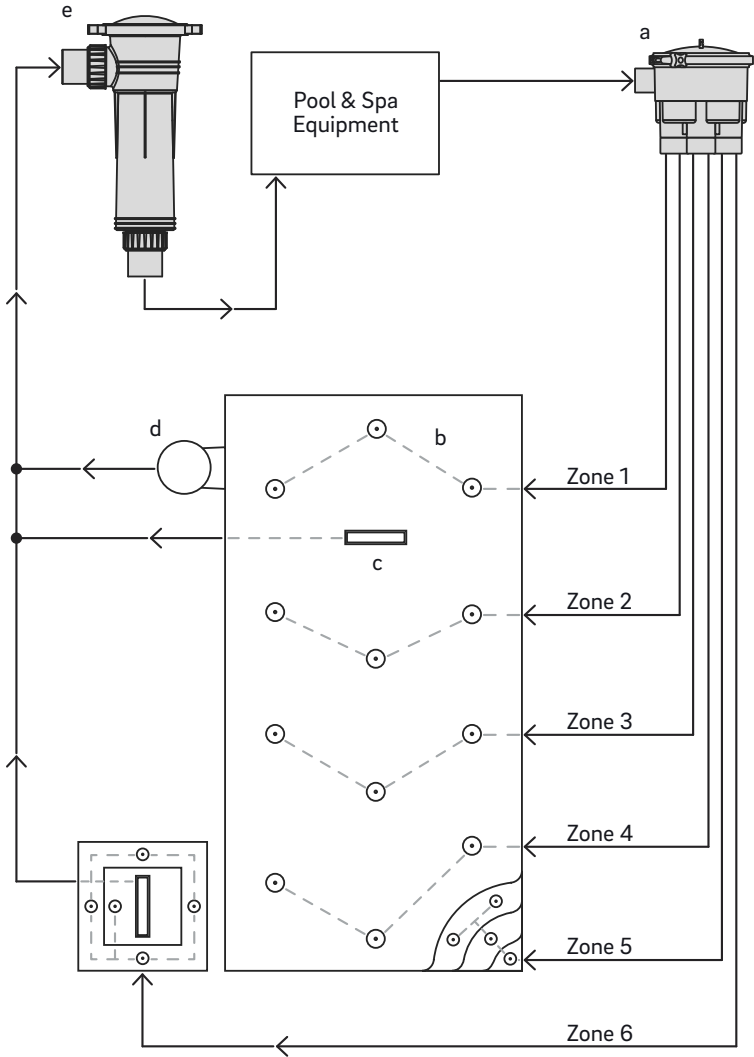


Figure 1



# Operating Instructions

The operating instructions for your new A&A system are very simple...

*...There aren't any!*

That's right, your A&A in-floor system is so advanced, yet so simple, that it requires no operating procedures or even routine maintenance to keep it operating at peak efficiency. Simply empty the Leaf Vac™ and other leaf traps, and clean the pool filter as you normally would. That is all there is to it. The A&A in-floor system operates automatically.

## Operating Time

The operating time of your in-floor system is exactly the same as the run time of your pool's filtration system and will take no longer than what is normally required to keep your pool clear, clean and sanitized. However, operation time is based on atmospheric conditions in your area that deliver sun, wind, rain, dust, etc. During summer months, periods of heavy use or large storms, your system may require additional operating time.



## Timer Settings

1. Set the pump to run for 12 hours a day for the first five days, backwashing the filter and emptying the skimmer, pump basket and Leaf-Vac™ basket, as needed.
2. Next, decrease the time by one hour each day until you notice the pool needs to be cleaned.
3. Finally, increase the time by one hour a day until the pool remains clear and clean.

*To ensure proper filtration and turnover rate, run time should be no less than 4 hours per day.*

In the event of a storm or other adverse conditions, vacuum your pool immediately to remove debris. This may also be the case if you were planning to use the pool within the next 24 hours. Otherwise, operate the system for as long as needed to clear the pool, and then return to the normal operating time.



# Wave Valve Features

## Speed Control

The rotation speed of the Wave valve's internal actuator is determined by the position of the clear lid on the water valve. Attached to the bottom of the lid is the flow diverter, which controls the speed the propeller operates by regulating the volume of water that is fed to it. For maximum cleaning efficiency, we recommend that the cycle time for each zone be adjusted so that each cleaning head runs fully extended off the floor for approximately 30-45 seconds.

To make adjustments to the speed of the Wave valve the following procedure can be followed:

1. Turn the pump off.
2. Locate the speed control guide molded onto the top lip of the valve's housing.
3. Place the lid on the valve housing, making sure the molded groove in the lid is positioned over the speed control valve guide.
4. Rotating the lid counter-clockwise increases the rotation speed and rotating the lid clockwise decreases the rotation speed (Figure 2).

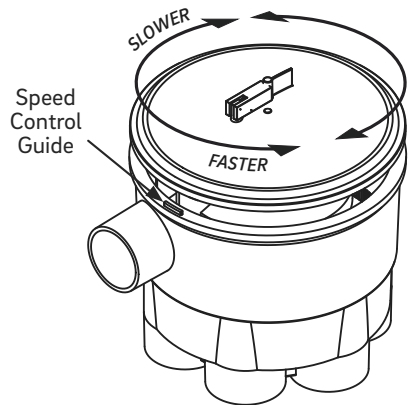


Figure 2

5. Once you achieve the desired speed, remove the band clamp and, with a marking pen, place a mark on the edge of the lid and valve housing as registration marks. This allows the lid to be replaced to the same position, if the water valve cover is removed later.

## QuickStop™ (pause control)

At some point, you may not want to stop the filtration system while people are using and enjoying the pool. In this case, having the ability to pause the valve on the deep-end zone or in the spa, to power the spillway, will allow the pool water to continue filtering without cycling throughout the pool.

1. To pause your system, raise the black lever on the clear lid to the full vertical position so that it locks in place (Figure 3).
2. To restart the valve, return the lever to its original horizontal position.

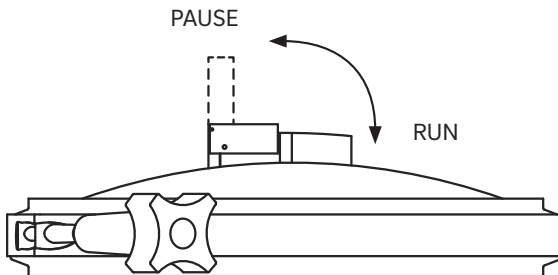


Figure 3

## Removing the Wave Valve Lid

1. Turn the pump off.
2. Loosen the thumbscrew knob (Figure 4) and remove the band clamp from the Wave valve.
3. Lift the clear lid from the actuator valve and set aside on a clean surface.

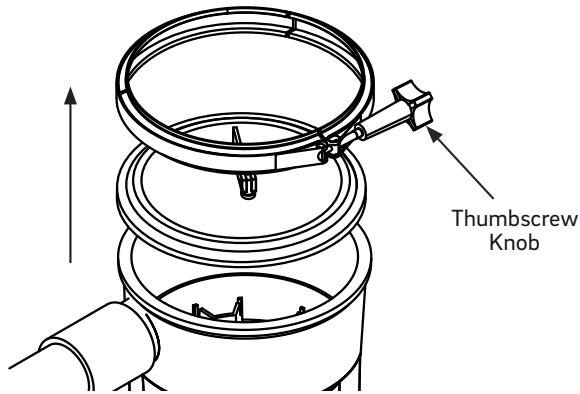


Figure 4

## Replacing the Wave Valve Lid

1. Clean and lube the O-ring.
2. Place the clear lid over the housing, lining up the center shaft with the guide in the lid and the speed control guide with the groove in the lid. Push gently down into position.
3. Install the band clamp and tighten the knob. Carefully alternate tapping around the perimeter of the band clamp while tightening the knob.

The LeafVac™ significantly extends the overall debris removal capabilities of your system. By removing soaked leaves, sand, insects and other small debris that are extracted from the pool, they are then conveniently deposited in a basket located inside the LeafVac™. The LeafVac™ is conveniently located in the mechanical equipment area in order to maintain the aesthetics of your pool area.

We recommend that you periodically empty the debris captured in the basket. To do so:

1. Turn the pump off.
2. Remove the lid from the Leaf-Vac™ canister by turning in a counterclockwise direction.
3. Lift the lid from the canister, remove the basket and empty the debris (Figure 5).
4. After emptying the basket, return the basket to the canister, replace the lid, turning it clockwise until it locks into place. Be sure not to overtighten.

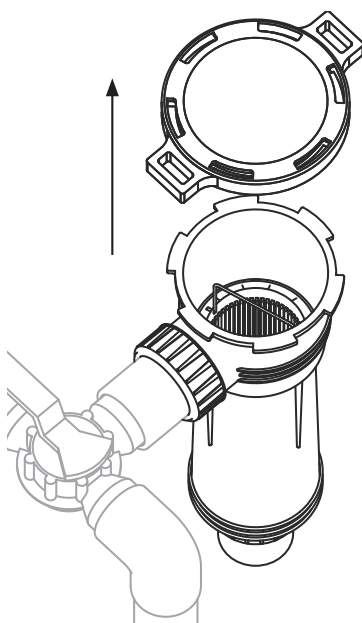


Figure 5



# QuikSkim Skimmers

## Basket and Silt-sock

Your QuikSkim or QuikSkim Ultra comes with a silt-sock that can be used inside of the basket or removed if it is not needed.

It is designed to pull out large pollen, hair and other fine debris that would normally pass through or clog the skimmer basket.

Removing the silt-sock is easy, to do so:

1. Begin by rolling up the edge of the silt-sock from around the top of the basket until it comes around the basket's handle (Figure 6a).

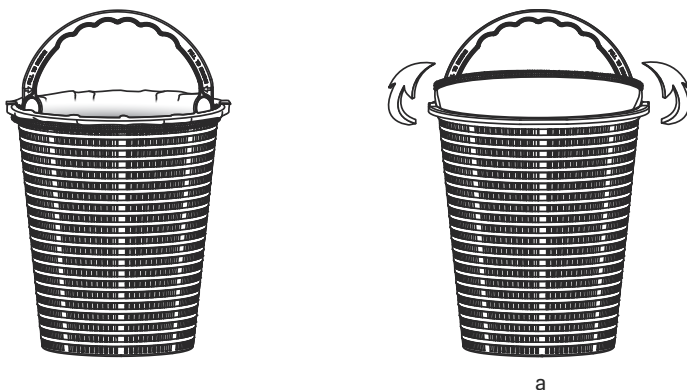


Figure 6

2. Hold the side of the basket handle to pull the handle pin away from the basket slot until it is removed from the slot (Figure 7a) and repeat this procedure on the other side of the handle until the handle and silt-sock are free to remove from the basket (Figure 7b).

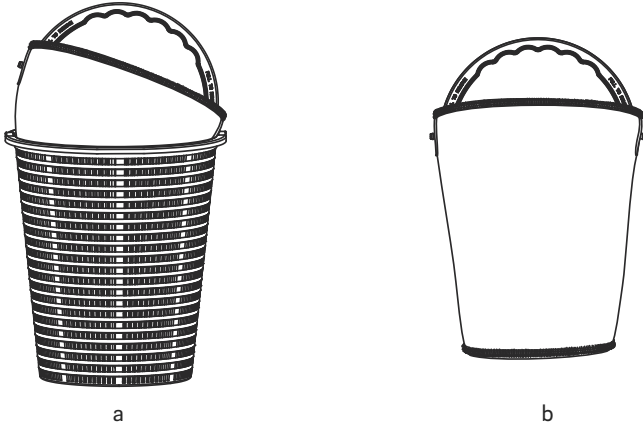


Figure 7

3. Once the handle is separated from the basket, the silt-sock can be removed and emptied (Figure 8a). A garden hose may be required to spray off any fine debris that may be caught in the fine mesh.

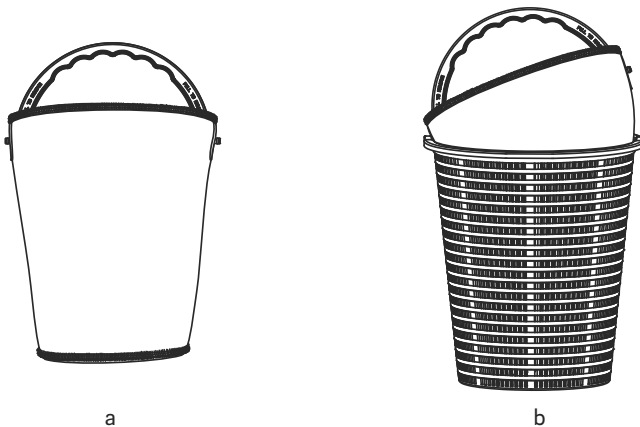


Figure 8

4. To reinstall the silt-sock into the basket, locate the manufactured holes in the silt-sock and push the handle pins into each hole and then begin to insert the pins into the basket (Figure 8b). Once complete, roll the silt-sock over the basket lip (Figure 9a).

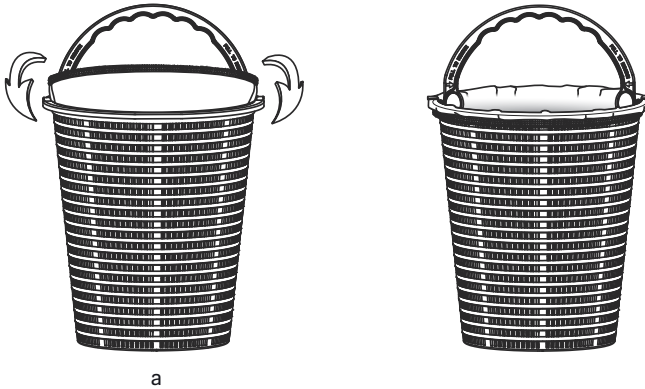


Figure 9

## Adjusting the Venturi for Optimal Performance

Proper flow to the venturi nozzle inside of the skimmer can be set by adjusting the shut-off valve on the manifold before the Wave valve. The manifold will look like a series of 'Tee' fittings, coming off of the main plumbing line entering the Wave valve.

Sometimes the shut-off valve for the pipes coming out of the manifold are not labeled. Be sure to identify the correct line going to the skimmer's venturi before making any final adjustments.



To adjust the volume of water feeding the venturi nozzle inside your skimmer, open the shut-off valve (Figure 10a) a little bit at a time until you've reached the desired flow entering the mouth of the skimmer. You will know when you have opened the shut-off valve too much because you begin to hear a gurgling sound at the skimmer. This is a result of too much water passing through the nozzle, creating cavitation. If you hear this sound slowly close the shut-off valve until the sound goes away.

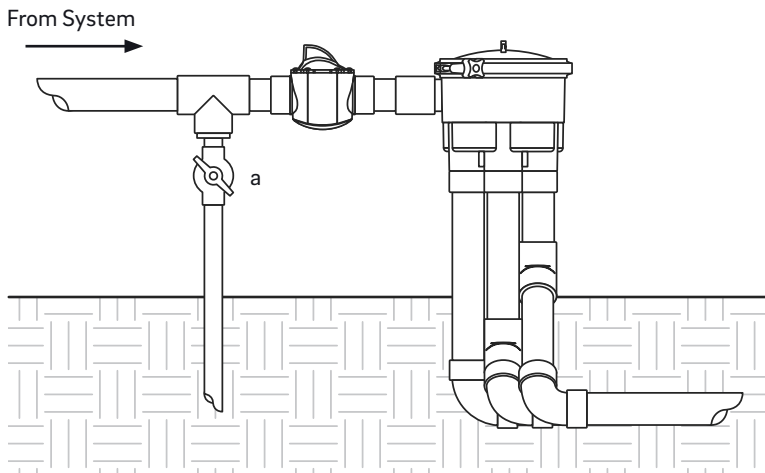


Figure 10

## Switching Between Venturi and Suction Operation

For normal day-to-day operation, the Quikskim or QuikSkin Ultra should remain in venturi operation only. However, there may be times when the suction may need to be utilized, such as vacuuming extreme storm debris.

## Normal Venturi Operation

When the QuikSkim or QuikSkim Ultra is in venturi operation, the water entering the pump should be diverted to allow all of the suction to be pulled through the main-drain and none of the suction pulled from the skimmer (Figure 11). This arrangement will result in the main-drain providing maximum debris removal from the bottom of the pool, while the QuikSkim or QuikSkim Ultra skimmer provides maximum debris removal from the surface, without sacrificing suction by sharing with the main-drain.

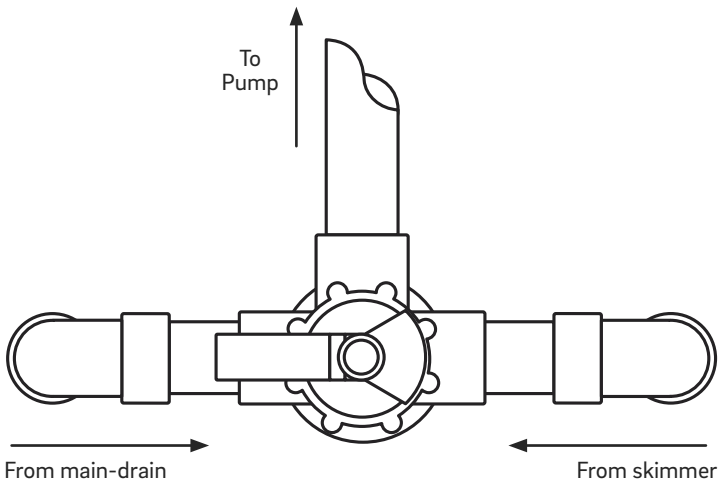


Figure 11

The venturi action of your QuikSkim or QuikSkim Ultra operates at the lowest volume of water than any other venturi skimmer, maximizing overall system efficiency and providing all of the power to the heads...

*...where it belongs!*

## Suction Operation

Shut off the flow to the venturi line completely by closing the shut-off valve on the manifold before the Wave valve (Figure 10).

When the QuikSkim or QuikSkim Ultra is in suction operation, the water entering the pump should be diverted to allow about of the suction from the main-drain and remaining suction from the skimmer (Figure 12). This arrangement will result in the pump pulling majority of the water from the skimmer, and a little from the main-drain.

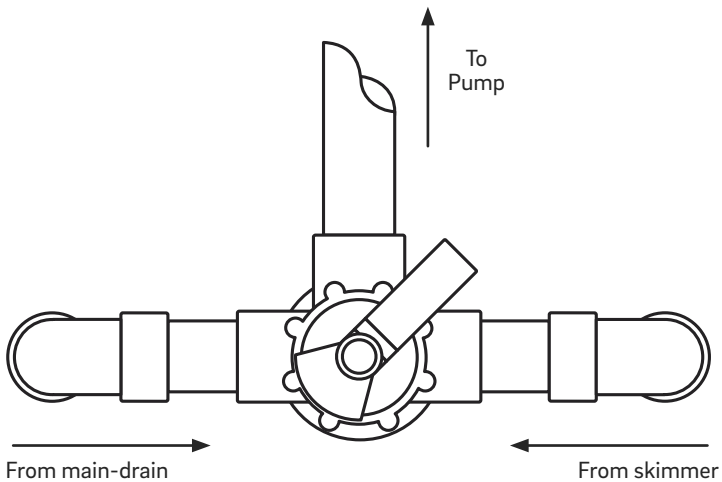


Figure 12

Once the need for suction operation is complete, return the skimmer to venturi operation. There is absolutely no benefit to operate the suction and venturi simultaneously. This will in fact, reduce overall system efficiency.



A&A Manufacturing™



# General Maintenance

## Skimmer, LeafVac™ and Pump Baskets

Empty the LeafVac™, skimmer and pump baskets as needed, but **no less** than once a week. This will ensure that your pool isn't starved of the flow required to operate.

## Filters

To keep your pool running efficiently, you must backwash or clean the filter as needed. Most manufacturers recommend a backwash or filter cleaning when the pressure has increased 8-10 psi above the clean operating pressure (when the filter was first installed). This can be recorded and checked by observing the gauge on top of the filter tank.

If you have a Diatomaceous Earth (DE) filter, you need replace DE after each backwash procedure is performed. To do this:

1. For your safety, avoid breathing the DE powder by always wearing a particle mask.
2. Remove the skimmer basket and close the shut-off valve (Figure 10a) sending water to the skimmer venturi. Failure to do so will result in DE blowing into the pool.
3. Place the skimmer into Suction Operation (Figure 12), then add the DE where the basket normally sits.
4. Add 1lb of DE at a time until it is no longer visible in the skimmer, return the valves to their normal positions, and replace the skimmer basket.



# Proper Chemistry

Proper water chemistry is recommended to ensure the longevity of the A&A system components.

What		Min.	Ideal	Max.
Free Chlorine	ppm	1.0	2.0 - 4.0	None given*
		2.0	2.0 - 4.0	None given*
Combined Chlorine	ppm	0	0	0.2
		0	0	0.5
Total Bromine	ppm	1.0	2.0 - 3.0 Residential 3.0 - 4.0 Public	None given*
		2.0	2.0 - 4.0 Residential 4.0 - 6.0 Public	None given*
PHMB	ppm	30	30 - 50	50
pH	-	7.2	7.4 - 7.6	7.8
Total Alkalinity (as CaCO <sub>3</sub> )	ppm	60	80 - 100** 100 - 120***	180
Total Dissolved Solids	ppm	N/A	N/A	1,500 ppm over start-up****
Calcium Hardness	ppm	150	200 - 400 Pools	1,000
		100	150 - 250 Spas	800
Visible Algae	-	None	None	None
Bacteria	-	None	None	Local Code
Cyanuric Acid	ppm	10	30 - 50	100
Temperature	°F	Personal preference	Pools: 78° - 94° Spas: Personal preference	104°
Ozone (in air)	-	-	0.1 over 8 hr time-wtd. avg.	
ORP	mV	650	-	-

\* U.S.EPA maximum of 4.0 ppmchlorine/8.0 ppm bromine is noted.

\*\* For calcium hypochlorite, lithium hypochlorite, or sodium hypochlorite.

\*\*\* For sodium dichlor, trichlor, chlorine gas, or bromine.

\*\*\*\* Including inorganic salt added.



# Troubleshooting

In the unlikely event that your A&A system does not appear to be operating at peak efficiency, please the following procedure to determine a possible solution.

1. Turn the pump off.
2. Clean the pool filter and empty all debris baskets.
3. Make sure all auxiliary, directional valves are closed (i.e. therapy heads, aerator, surface returns, spillways, etc.).
4. Ensure the return water is dedicated to the Wave valve.
5. Turn on the pump.
6. If your pool is equipped with a heater, make sure the heater bypass valve is adjusted properly and is not completely closed.
7. Observe how your system is operating. If it is not running properly, then refer to the chart (Figure 14) to help pinpoint your issue.
8. If you need additional help, please contact our Customer Satisfaction at one of these phone numbers:

(800) 851-8492 outside Arizona

(602) 256-6935 in Arizona

## Symptoms, Probable Causes and Solutions

Symptom	Probable Cause	Solution
Water Actuator Valve does not rotate or the impeller is not turning.	Debris is in the valve or gears.	Remove debris and flush the valve.
	Pause control is ON.	Turn pause control OFF.
	Return water is not properly diverted to the Wave valve.	Position valves on return manifold to direct all water to the Wave valve.
	Water flow issues	See 'Water Flow Issues' below.
	Damaged gear set	See 'Damaged Gear Set' below.
Cleaning heads do not come up all the way.	Dirty filter or baskets are full of debris.	Empty all baskets and clean the filter.
	Return water is not properly diverted to the A&A system.	Position valves on return manifold to direct all water to the Wave valve.
Cleaning head will not go down.	Debris is stuck in the head.	Remove the cleaning head and flush it with water, to remove any debris.
A&A system performance is not the same as it was when the pool was first started up.	Filter is dirty or the debris baskets are full.	Empty all baskets and clean the filter.
	Debris is stuck in the head.	Remove the cleaning head and flush it with water, to remove any debris. Check for debris in the orifice and flow path.
	Return water is not properly diverted to the Wave valve.	Position valves on return manifold to direct all water to the Wave valve.



## Symptoms, Probable Causes and Solutions

Symptom	Probable Cause	Solution
Low pressure at the Water Actuator Valve.	Excessive fittings.	Replumb equipment header.
	No bypass is installed on the heater or salt chlorinator.	Install a bypass.
	Improper equipment sizing (i.e. pump, filter).	Replace the undersized equipment item.
	Pump speed is too low (variable speed pumps).	Increase the pump speed until there is 10 psi at the cleaning head.
	Dirty filter or baskets are full of debris.	Empty all baskets and clean the filter.
High pressure at the Water Actuator Valve.	Return water is not properly diverted to the Water Actuating Valve.	Position valves on return manifold to direct all water to the Wave valve.
	Low-flow heads have been installed instead of High-flow heads.	Replace the appropriate heads with High-flow heads.
	Obstruction in the heads or the line.	Remove any obstructions and flush out the heads.
	Pump is too large for the system.	Bypass the excess water (to spa, water feature, etc.).
	Pump speed is too high (variable speed pumps).	Decrease the pump speed until there is 10 psi at the cleaning head.

## Symptoms, Probable Causes and Solutions

Symptom	Probable Cause	Solution
Damaged Gear Set	Wear and tear	Replace the gear kit.
	Operating pressure is too high.	Relieve pressure.
	Gears are turning too fast.	Shut the system off and adjust the Speed Control.
	Chemical feeder or salt-cell is passing chemicals into the Water valve.	Ensure that the chemical feeder or salt-cell is installed according to the Installation Instructions.



# Replacement Parts

## NOTE:

If you do not have your warranty number, you must first contact A&A Customer Satisfaction at one of the following phone numbers for directions on how to replace the parts.

## Warranty Parts

1. Package and ship the parts, making sure you include the following information:
  - Warranty certificate number
  - Your complete name, address and phone number
2. Pre-pay the freight and ship the parts to:

A&A Manufacturing Warranty Department  
3750 West Indian School Road  
Phoenix, AZ 85019

## Out-of-warranty Parts

You do not need to return out-of-warranty parts. You may order replacement parts by calling A&A Customer Satisfaction toll-free at, (602) 256-6935 in Arizona or (800) 851-8492 outside of Arizona, or by visiting us on our website at [www.aamfg.com](http://www.aamfg.com) for a list of authorized Dealers and Retail locations.

# In-Floor Heads

G4 Head



G4 Venturi Heads



Orifice Types

(Steps & Benches)



Venturi Head Types

(G4V)

(G4V-HP)



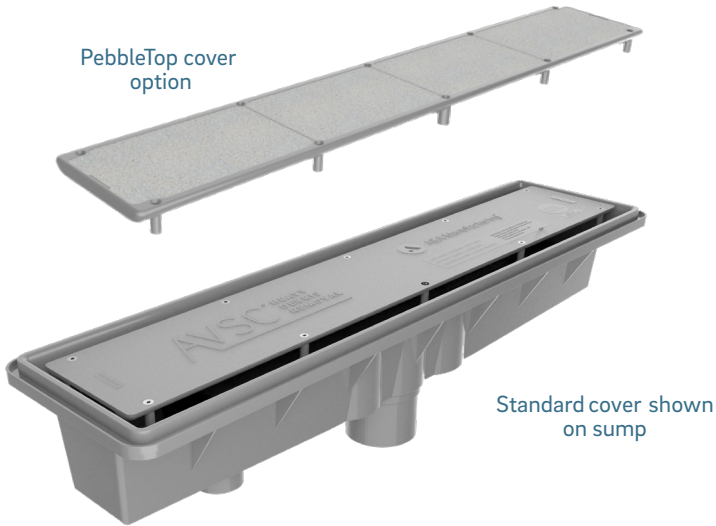
(Floor)

(Special)

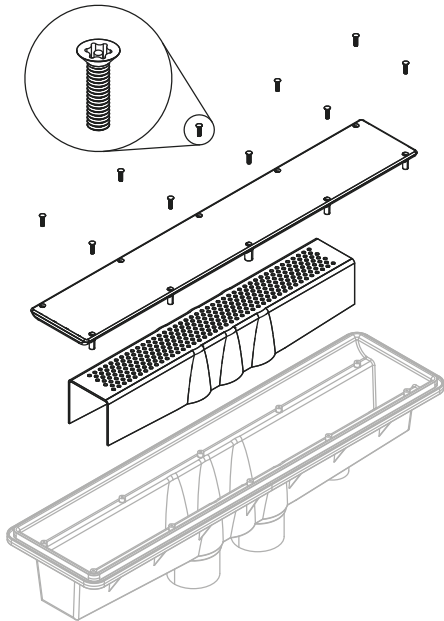


Head Remove Tool  
(G4, G4V & G4V-HP)

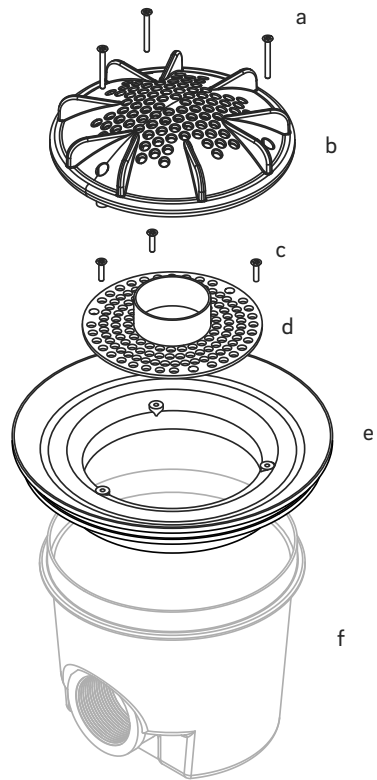
# AVSC2 Drain



- a. 1-3/8" stainless steel, Torx No.20 tamper-proof screws (qty. 10)
- b. Standard cover (*PebbleTop cover optional*)
- c. Baffle
- d. Sump (*shown for reference*)



## PDR2 Drain

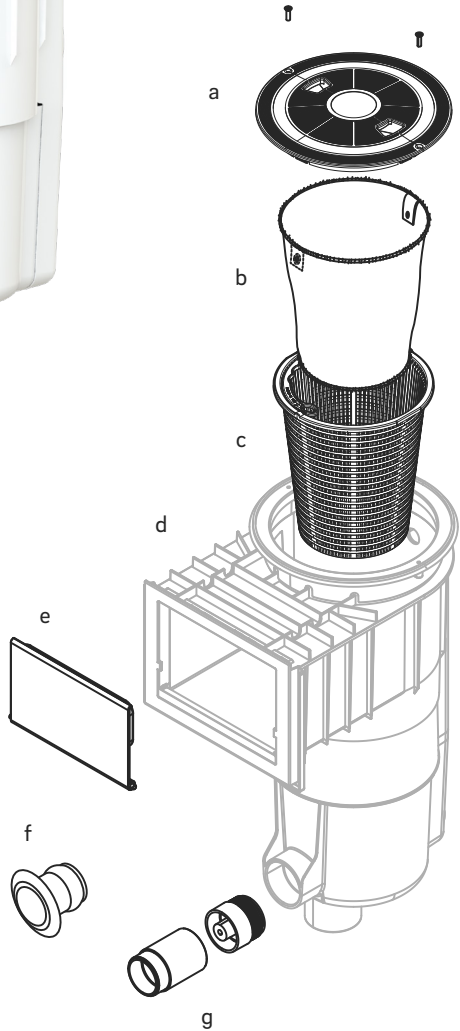


- a. Lid screws (qty. 3)
- b. Lid
- c. Baffle screws (qty. 3)
- d. Baffle
- e. Plaster ring w/ waterstop
- f. Sump (shown for reference)

# QuikSkim and QuikSkim Ultra Parts



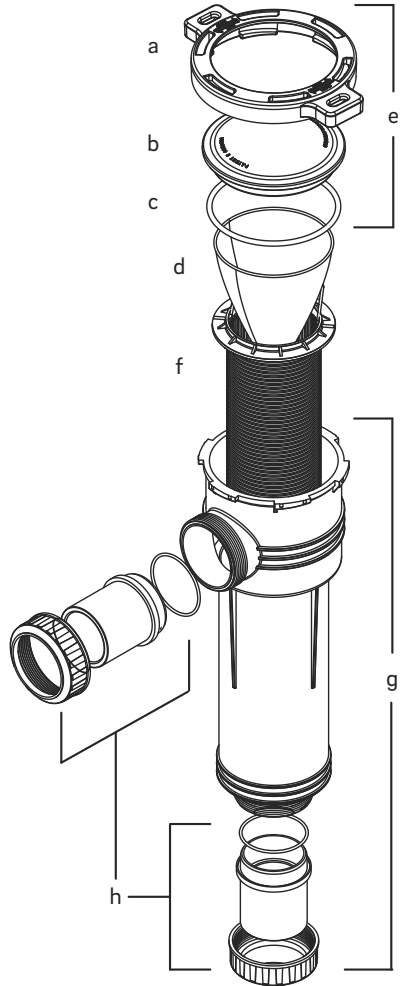
- a. Lid & screws (qty. 2)
- b. Silt-sock
- c. Basket
- d. Body & Deck ring  
(shown for reference)
- e. Weir
- f. Knock-in fitting
- g. Venturi nozzle
- h. Start Up Kit (includes basket & Venturi nozzle)



# LeafVac™ Parts



- a. Locking ring
- b. Lid
- c. Lid O-ring
- d. Silt-sock
- e. Lid assembly
- f. Basket
- g. Canister (includes unions)
- h. Union set (qty. 2)

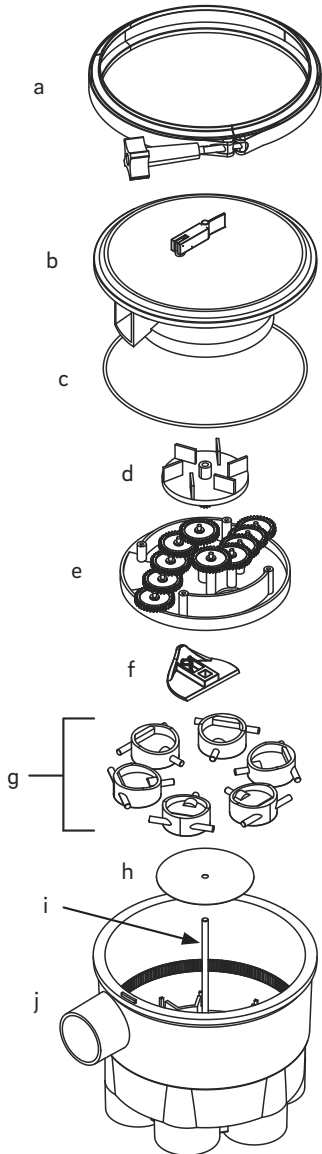




# Wave Valve Parts



- a. Band-clamp
- b. Lid & flow diverter
- c. Lid O-ring
- d. Propeller
- e. Gears & gear-plate
- f. Cam
- g. T-valves (qty. 6)
- h. Anti-friction disc
- i. Shaft
- j. Housing





To activate your warranty, you must complete the warranty card (inserted in this owner's guide) and return it to A&A Manufacturing within 30 days of pool start-up. Failure to mail the completed card may void your warranty.

## Warranty Coverage

- Lifetime Limited Warranty is to the ORIGINAL homeowner only, it is nontransferable.
- Your pool builder must have submitted a plan and had your pool designed as an Authorized A&A pool builder.
- Lifetime warranty items are part for part. You must return your old part to receive your exchange or credit.
- There is no warranty coverage on labor or service.

Upon verification of warranty coverage, there are two warranty options available.

1. **EXCHANGE WARRANTY:** Return the defective parts to us, once we receive, we send you the new parts.
2. **ADVANCED WARRANTY:** Purchase new parts on a credit card, and we will send out the new parts to you. You send us the defective parts. Once we receive the defective parts, your credit card will be refunded.

*If you are interested in the Advanced Warranty, please call customer service at 1-800-851-8492 to place your order.*



# Warranty Card

This warranty card must be filled out completely by the original purchaser of the A&A System and mailed to A&A Manufacturing or register online at [www.aamfg.com](http://www.aamfg.com) within 30 days of start-up.

## PLEASE PRINT CLEARLY

Purchasers Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone (day) \_\_\_\_\_ Phone (evening) \_\_\_\_\_

Installing Pool Builder \_\_\_\_\_

Please take the time to help us by completing the following brief, optional questions. Thank You!

1. Please select the reasons why you chose an A&A System.

- Cleaning
- Energy Savings
- Safety - No Pressure Buildup
- No Periodic Maintenance
- Even heating (from bottom)
- Plain Language Lifetime Warranties
- Water Circulation (healthy water)
- Built-in Aesthetics (no hose)
- Individual Debris Removal
- Other \_\_\_\_\_

3. Did you purchase an in-ground spa with your pool.

- Yes  No

4. Pool construction type?

- Concrete  Vinyl  Fiberglass

5. How did you learn about A&A?

- Referral (word of mouth)
- Pool salesperson
- Friend or Family Member
- Newspaper Ad
- Mail Advertisement
- A&A Website
- Other \_\_\_\_\_

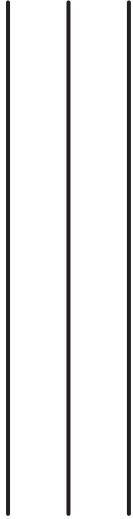
2. This is my  1st  2nd  3rd swimming pool.

6. Would you recommend an A&A to a friend?

- Yes  No



PLACE FIRST  
CLASS STAMP  
HERE



**A&A MANUFACTURING**  
**3750 West Indian School Road**  
**Phoenix, Arizona 85019**