



# FLOWSTAR™ SKIMMER

## COMMERCIAL & RESIDENTIAL INSTALLATION, OPERATION & PARTS

IMPORTANT SAFETY INSTRUCTIONS FOR SKR1xxx, SKR2xxx, SKR3xxx, SKR4xxx &  
SKR5xxx

(xxx = COLOR SUFFIX)



**READ AND FOLLOW ALL INSTRUCTIONS**



MEETS OR EXCEEDS NSF50/IAPMO SPS3-93\*

### ▲ WARNING!

HAZARDOUS SUCTION. RISK OF HAIR OR BODY ENTRAPMENT, DROWNING OR DISEMBOWELMENT. When an equalizer is used, the opening in the pool shall be protected by a VGBV Compliant drain cover rated for at least 55 GPM or greater.

NOTE: Skimmer is not equivalent to a main drain. If not using a single, unblockable drain, all pools, spas and hot tubs must have at least two main drains besides skimmer(s) or a "single, unblockable" drain.

### ▲ CAUTION!

BLOCKING PUMP SUCTION CAN CAUSE PRESSURE SURGES AND WATER HAMMER, WHICH CAN DAMAGE PUMP OR PIPING AND MAY CAUSE FLOODING.

## SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

### OPERATION

Pump suction pulls water through skimmer. Water flowing into skimmer carries floating leaves, bugs, etc., where they are trapped in the skimmer basket. (Dust, body oils, etc., pass through the basket to be removed by the filter.) Floating weir in skimmer opening enhances surface flow and skimming action.

#### Water Level

Keep pool, spa or hot tub water level at least 1.5" to 2" above bottom of skimmer opening for proper operation.

#### Float Valve

Float valve protects pump from loss of prime if skimmer clogs or flow through skimmer is restricted (See Figure 1 and 2). Trimmer valve plate on bottom of float valve balances flow between skimmer and main drains, or multiple skimmers.

### FLOW ADJUSTMENTS

Skimmer Without Float: Adjust valves located before the pump (See Figure 4).

Skimmers with Float: Remove deck lid, skimmer basket and float valve to adjust trimmer plate on bottom of float (See Figure 5). Move trimmer plate to side to open trimmer port allowing more flow through skimmer and less flow through main drains, or other skimmers; close trimmer plate for less flow through skimmer and more flow through main drains, or other skimmers.

#### Vacuuming Pool

Remove deck lid and skimmer basket. If there is a float valve, remove it and plug equalizer port that is closest to the pool. Replace basket and place vacuum plate on top of basket. Fill the vacuum hose with water and then place your hand over the end of the hose as you bring it through the skimmer throat, or over the deck to attach it to the vacuum plate (Figure 3). Follow instructions in vacuum owner's manual for vacuuming operation. After vacuuming, remove hose, vacuum plate and basket, unplug equalizer port and reinstall float valve, basket and deck lid. Be sure to use screws to secure it in the deck frame to prevent accidentally dislodging it.

**CAUTION: TO PREVENT INJURY, REPLACE DAMAGED OR DEGRADED DECK LIDS BEFORE USING DECK AREA.**

#### Equalizer

Inspect equalizer cover regularly for damage and debris.

## TYPICAL PUBLIC POOL SKIMMER INSTALLATION WITH EQUALIZER LINE INSTALLED

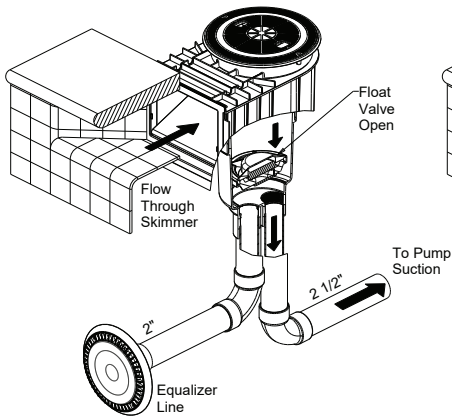


Figure 1: Normal operation: float valve open.

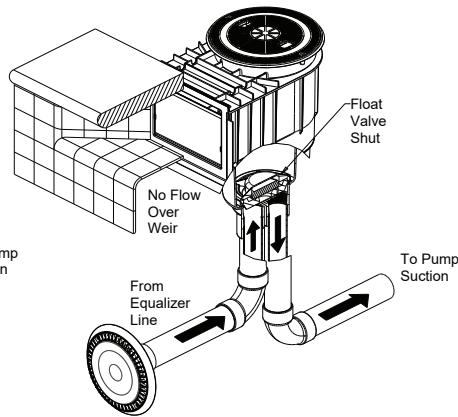


Figure 2: Equalizer operation; float valve closed.

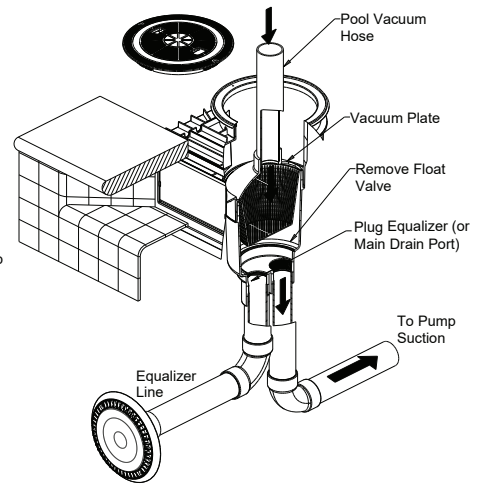


Figure 3: Vacuuming pool; float and check valves removed, equalizer port plugged.

If water level is too low, the pump may remove all water from the skimmer causing the float valve to close, diverting pump suction to equalizer (or main drain) line allowing some water to reach the pump. Float valve will remain closed until pump stops. If pump starts again before stoppage is cleared, float will close again until pool water level returns to normal.

**WARNING! LOW WATER LEVEL CAN MAKE IT DIFFICULT TO EXIT POOL AND MAY DAMAGE PUMP AND OTHER POOL**

### EQUIPMENT.

Note: An equalizer line is a way to bypass the skimmer and it is intended to prevent damage to the pump when pool water level is below the throat of the skimmer or the basket is full. You must check your local code as some require equalizer lines, others don't allow them and others leave it to the pool designer. When equalizer line is used the cover inside the pool must be VGB compliant, meeting the requirements of ASME/ANSI 112.19.8a-2008 or ANSI/APSP-16.

## TYPICAL RESIDENTIAL INSTALLATION

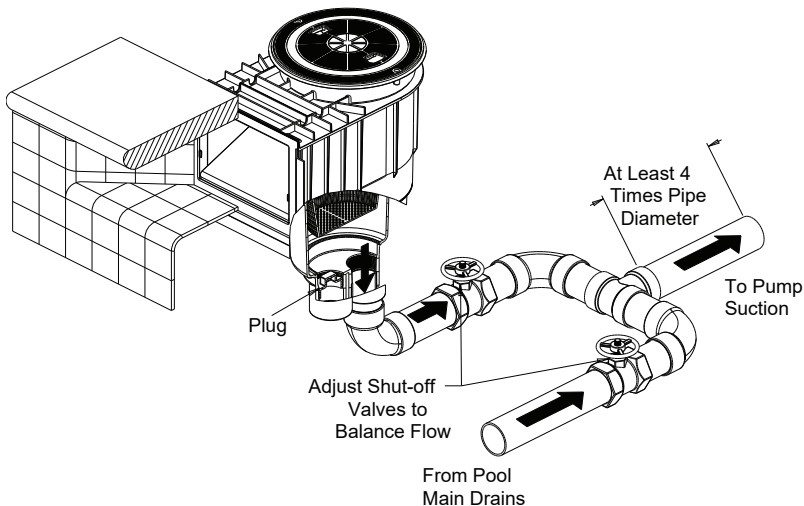


Figure 4: Typical residential installation without float valve. Use with at least two suction outlets.

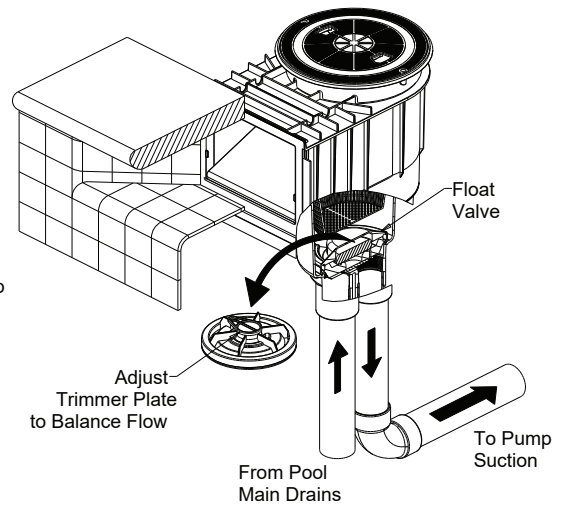


Figure 5: Typical residential installation with float valve. Use with at least two suction outlets.

## REPAIR PARTS LIST

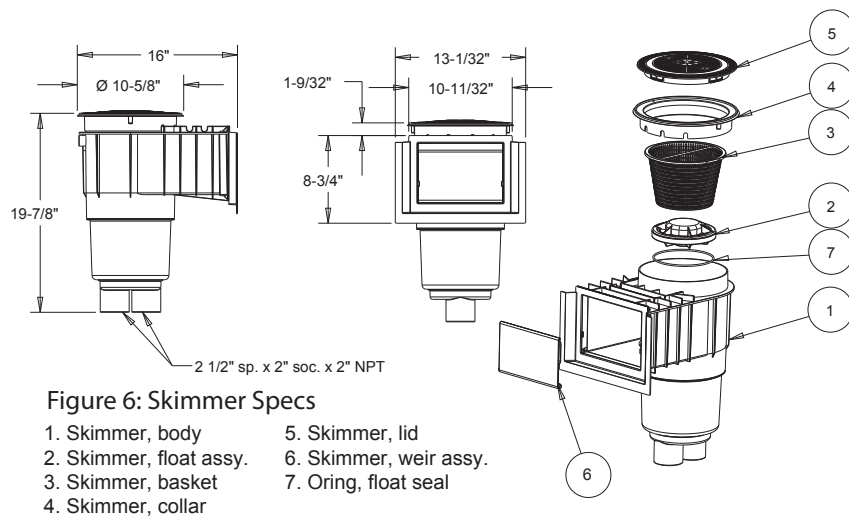


Figure 6: Skimmer Specs

- |                         |                        |
|-------------------------|------------------------|
| 1. Skimmer, body        | 5. Skimmer, lid        |
| 2. Skimmer, float assy. | 6. Skimmer, weir assy. |
| 3. Skimmer, basket      | 7. Oring, float seal   |
| 4. Skimmer, collar      |                        |

## Part Numbers/Colors

- SKR101 White
- SKR102 Black
- SKR103 Lt. Gray
- SKR104 Blue
- SKR105 Dk. Gray
- SKR108 Tan

## MAINTENANCE

**Weir:** Periodically check weir for free operation. Replace if damaged or worn.

**Strainer basket:** Check strainer basket as often as needed for accumulated leaves, debris, etc. Empty basket as required. Restart the pump to reset float valve if it is closed.

**Float Valve:** Periodically check that float valve is operating freely and is not waterlogged. If necessary, tighten trimmer plate pivot screw to maintain desired flow balance.

**Equalizer Fittings:** Periodically check that wall fittings are correctly installed and that covers are tight to fittings.  
**Water level:** Maintain water level at least 1.5 to 2" above bottom of skimmer opening for proper operation. Adjust trimmer plate if necessary.

**Winterizing:** Drain pool until level is below skimmer inlet. Remove cover, basket and float. Plug both bottom ports with standard 2" pipe plugs. Cover skimmer to prevent rainwater or snow from entering the skimmer where it could freeze.

**WARNING! FALLING AND TRIPPING HAZARD. THE DECK LID MUST BE INSTALLED FLUSH WITH THE DECK LEVEL.**

Skimmer deck lid is made of impact and weather resistant materials, but extended use (5-10 years) may lead to reduced strength. Regularly check condition of skimmer lid. Look for cracks, chips, deterioration of plastic, etc. If any sign of damage or deterioration is found, replace the deck lid and fasteners.

## SKIMMER LAYOUT AND SUCTION LINE SIZING

Skimmers are critically important to remove floating contaminants, oils, and debris, for this reason modern pool building codes 100% of the filtration flow rate.

1. The minimum number of skimmers is based on facility type (See Table 1).
2. When selecting the location for skimmers place at least one so that the prevailing wind blows towards the skimmer
3. Size suction pipe based on the design flow rate such that the water velocity in the pipe will not exceed six feet per second. Use multiple pipes or the next size larger pipe for long pipe runs. See figures 5 and 7 piping layout

Table 1: Skimmers Needed

Facility	Area Per Skimmer (sq. ft.)
Public Pool	500
Residential Pool	800
Public and Residential Pool	150

**WARNING! PUMPS PRODUCE SUCTION THAT CAN BE EXTREMELY DANGEROUS IF AN EQUALIZER COVER IS LOOSE, CRACKED, BROKEN, MISSING, OR IF THE FLOW EXCEEDS THE COVER FLOW RATING**

## INSTALLATION

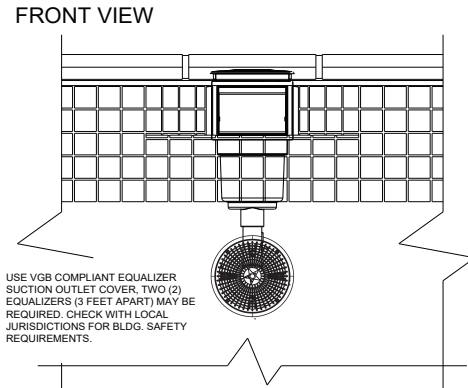
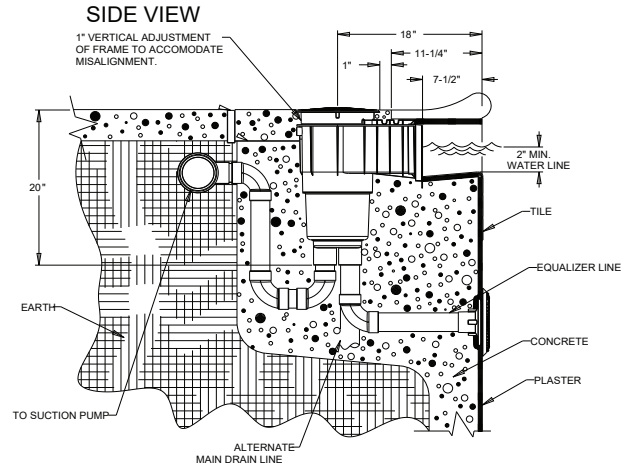
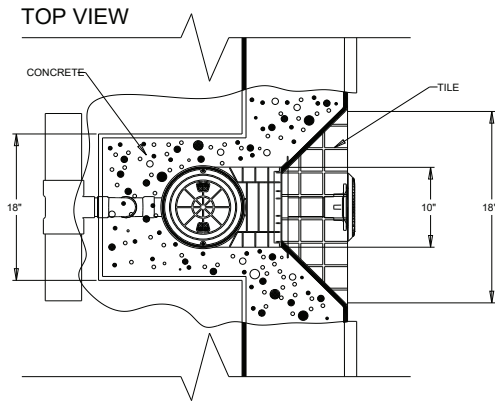
Concrete: See Figure 7 for basic dimensions. Top cover frame has 1" vertical height adjustment.

NOTICE: Skimmer MUST be surrounded by at least 4" of structural concrete in a monolithic pour.

## PIPE CONNECTIONS AND TESTING

Connect pump inlet line to rear port in bottom manifold (Figure 7). Skimmer base is PVC, and comes in a variety of manifold configurations. For threaded connections inside skimmer base, do not use pipe dope; to seal joint use RTV Silastic #732 (preferred), teflon tape or Plasto-Joint Stik. For slip connections, apply PVC primer to PVC pipe only. Then apply PVC to PVC solvent cement to both pipe and slip connections. Consult distributor for correct solvent cement for pipe used. Assemble joint per cement manufacturer's instructions, allowing recommended set time before pressure testing.

**WARNING! PLASTIC CEMENTS AND PRIMERS CAN BE FLAMMABLE, POISONOUS OR BOTH. CLOSELY FOLLOW CEMENT MANUFACTURER'S INSTRUCTIONS.**



**A Safe Drain is No Accident™**  
VGB Compliance Every Pool, Every Time

Figure 7: SKR1xxx skimmer installation drawings and specifications.

## LIMITED WARRANTY

Skimmers manufactured by AquaStar are warranted to be free of defects in material and workmanship for one year from date of installation. The foregoing warranties relate to the original consumer purchaser ("Purchaser") only. AquaStar shall have the option to repair or replace the defective product, at its sole discretion. Purchasers must pay all labor and shipping charges necessary to replace the product covered by this warranty. Requests for warranty service must be made through the installing dealer. This warranty shall not apply to any product that has been subject to negligence, misapplication, improper installation or maintenance, or other circumstances which are not in AquaStar's direct control. This warranty sets forth AquaStar's sole obligation and Purchaser's exclusive remedy for defective products. AQUASTAR SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR CONTINGENT DAMAGES WHATSOEVER. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND SHALL NOT EXTEND BEYOND THE DURATION OF THE APPLICABLE EXPRESS WARRANTIES PROVIDED HEREIN. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Supersedes all previous publications.

