


# 6" ULTRA SUCTION INSTALLATION INSTRUCTIONS

For Model Number: 640-82xx V

**VGBA 2017**  **WARNING:**  
**IMPORTANT SAFETY INSTRUCTIONS. READ, UNDERSTAND,  
AND FOLLOW ALL WARNINGS AND INSTRUCTIONS. SAVE  
THESE INSTRUCTIONS.**

Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

## SOFA INSTRUCTIONS

When installing and using this equipment, basic safety precautions shall always be followed, including the following: **IMPORTANT SAFETY INSTRUCTIONS. READ, FOLLOW, AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS.**

Any modification that increases the flow rate of the circulation system shall require re-evaluation of the cover/grate and sump to ensure that the flow rating of the Suction Outlet Fitting Assembly (SOFA) is not exceeded.

Missing, broken, or cracked cover/grates, sumps, mud-frames, or any other SOFA component shall be replaced before bathers are allowed to use the pool.

Loose cover/grates shall be reattached before bathers are allowed to use the pool.

This Blockable SOFAs to be installed ONLY in multiple SOFA systems; or the installer shall include one or more of the following devices or systems designed to prevent suction entrapment:

**SAFETY VACUUM RELEASE SYSTEM-** A system that ceases operation of the pump, reverses the circulation flow, or otherwise releases the vacuum in a circulation system when a blockage is detected, that has been tested by an independent third party and found to conform to ASME/ANSI standard A112.19.17 or ASTM standard F2387.

**SUCTION-LIMITING VENT SYSTEM-** A circulation system that incorporates a tamper-resistant atmospheric vent that is hydraulically located between the suction outlet and the circulation pump, which allows air to enter the circulation system and release the vacuum within the system when the suction outlet is blocked and the circulation pump is operating.

**GRAVITY DRAINAGE SYSTEM-** A powered circulation system, which utilizes a collector tank hydraulically located between the pump and the suction outlet that is filled by the gravitationally induced flow of water from the suction outlet, and is vented to the atmosphere by a tamper-resistant opening.

**AUTOMATIC PUMP SHUT-OFF SYSTEM-** A system that is designed to sense blockage of the suction fitting and then turn-off the power to the pump, and subsequently release the vacuum in the circulation system when a blockage is detected.

**DRAIN DISABLEMENT-** A device or system that permanently stops the flow of water from a SOFA.

**OTHER SYSTEMS-** Any other system determined by the Consumer Product Safety Commission to be equally effective as, or better than above-mentioned systems, at preventing or eliminating the risk of injury or death associated with pool drainage systems.



2200 East Sturgis Road, Oxnard CA 93030 • Phone 805.981.0262 • Fax 805.981.9403

www.waterwayplastics.com • waterway@waterwayplastics.com

- Suction cover life is 7 years, the sump wall fitting life is 14 years, the rest of the components have 25 year life, cover and all SOFA components shall be replaced on or before the end of service life.
- The use of adhesives or other attachment methods that prevent access to suction piping or SOFA components is prohibited.
- Please refer to Head Loss Curve.
- This is a blockable SOFA as marked on the suction cover.
- Hand tighten screws, **DO NOT USE POWER TOOLS TO INSTALL FASTENERS.** Ensure proper thread engagement to prevent cross-threading.
- Ensure proper flatness of installation surface.
- When mud-rings, sump and other components are held in place by the interior surface of the pool, the surface should be free of deterioration or voids
- Damaged Fasteners shall be replaced with original parts, and must be grade 316 stainless steel. The wall fitting shall be inspected for the presence of any CRACK or material loss. Cracked/damaged mud rings, sumps, or wall fittings shall be replaced.
- No unauthorized field modifications. Unauthorized modifications will void certification.
- This product is intended for use on gunite, vinyl, fiberglass, and roto-molded pools, spas and hot tubs.
- No modification shall be made to SOFA structure or flow path unless the configuration has been certified as a new SOFA.
- Service life begins the month and year in which SOFA components are installed with or without water.
- For winterization remove the cover and plug the inlet.
- Use TORX wrench and screw driver for service and removal of fasteners.
- Observe cover/grate/fasteners for damage each operational day.
- During installation ensure components and fastener receptacles are clean, free of debris and obstructions.
- Hand-check cover/grate for snugness to the sump/frame/wall fitting after installation.
- SOFA installation components with crack, chunks, or pieces broken off, stripped screw holes, and/or unusual discoloration should be replaced.
- The mounting surface or interior surface of the pool should be free of deterioration.
- Start installation of screws by hand to ensure proper thread engagement and to prevent cross-threading.
- Do not exceed the safe flow rating of SOFAs as listed.
- All SOFAs should be installed in accordance with Waterway installation instructions.
- Under no condition should SOFA special flow rating be exceeded while the pool is open.
- The capacity of secondary circulation system (skimmer, cutters, etc) should not be included when evaluating an individual suction system flow rating.
- For the flow rating for pools with multiple blockable SOFAs in one body of water without isolation valves: combine all SOFAs, minus the flow rate of one, if all are not equal use the larger flow rate.
- "Blockable" SOFAs in new pools shall be installed in multiple-SOFA system ONLY.
- "Blockable" SOFAs in existing pools with single SOFA systems shall be installed with an additional anti-entrapment device or system.
- This SOFA is suitable for in-place replacement.
- SOFA(s) should be chosen so that the individual suction system flow rate is greater than the pumping systems maximum system flow rate.
- The flow rating for existing pools with a single blockable SOFA is the flow rating of the SOFA when installed with an additional device to prevent suction entrapment.
- A single blockable SOFA in a system that does not have an additional device or systems shall result in a flow rate of zero.

# IMPORTANT SAFETY INSTRUCTIONS

## WARNING - SUCTION ENTRAPMENT HAZARD

Suction in suction outlets and/or suction outlet covers which are damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:

**Hair Entrapment:** Hair can become entangled in suction outlet cover.

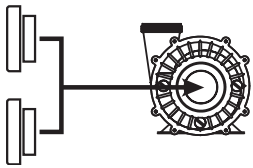
**Limb Entrapment:** A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.

**Body Suction Entrapment:** A negative pressure applied to a large portion of the body or limbs can result in an entrapment.

**Evisceration / Disembowelment Entrapment:** A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is damaged, broken, cracked, missing, or unsecured can result in evisceration / disembowelment entrapment.

**Mechanical Entrapment:** There is potential for jewelry, swimsuit, hair decorations, finger, toe, or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.

## TO REDUCE THE RISK OF ENTRAPMENT HAZARDS:



- A minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall) must be installed a minimum of three feet (3') / 1 meter

apart, as measured from suction pipe center to suction pipe center.

- Dual suction fittings shall be placed in such locations and distances to avoid "dual blockage" by a user.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum system flow rate shall not exceed the flow rating of any listed (per ASME A112.19.8-2007) suction outlet cover installed. In the event of one suction outlet being completely blocked, the

remaining suction outlets serving the system shall have a flow rating capable of the full flow of the pump(s).

- Never use a pool or spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- Two or more suction outlets per pump should be installed in accordance with latest APSP Standards and CPSC guidelines, and follow all National, State, and Local codes applicable.
- Replace the suction within 7 years from the installation date.
- Installation of a vacuum release system, which relieves entrapping suction, is recommended.

## USE ONLY GENUINE WATERWAY REPLACEMENT PARTS.

## WARNING



Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increased potential for suction entrapment as described on the previous page.



Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material, can result in an increased potential for suction entrapment as described on the previous page.



Suction outlet components have a finite life. The cover/grate should be inspected frequently and replaced at least every seven years, or if found to be damaged, broken, cracked, missing, or not securely attached.



This suction outlet is rated at 191 GPM when used with 215-8200, 215-8230 and 215-9290 fittings. This suction outlet is rated at 136 GPM when used with 215-8220 and 215-8210 fittings. This suction is rated at 77 GPM when used with 215-8240 and 215-8250 fittings. If the fitting is missing or broken, replace with a fitting of equivalent rating or higher. Use of a lower rated suction fitting could result in entrapment of the body which could result in serious injury including drowning.



Do not use or operate spa/hot tub if this suction fitting is missing, broken or not secured per instructions. The suction fitting is intended to prevent entrapment of the body. Use of the spa hot tub with a missing, broken or improperly secured suction grate may result in serious personal injury including drowning.



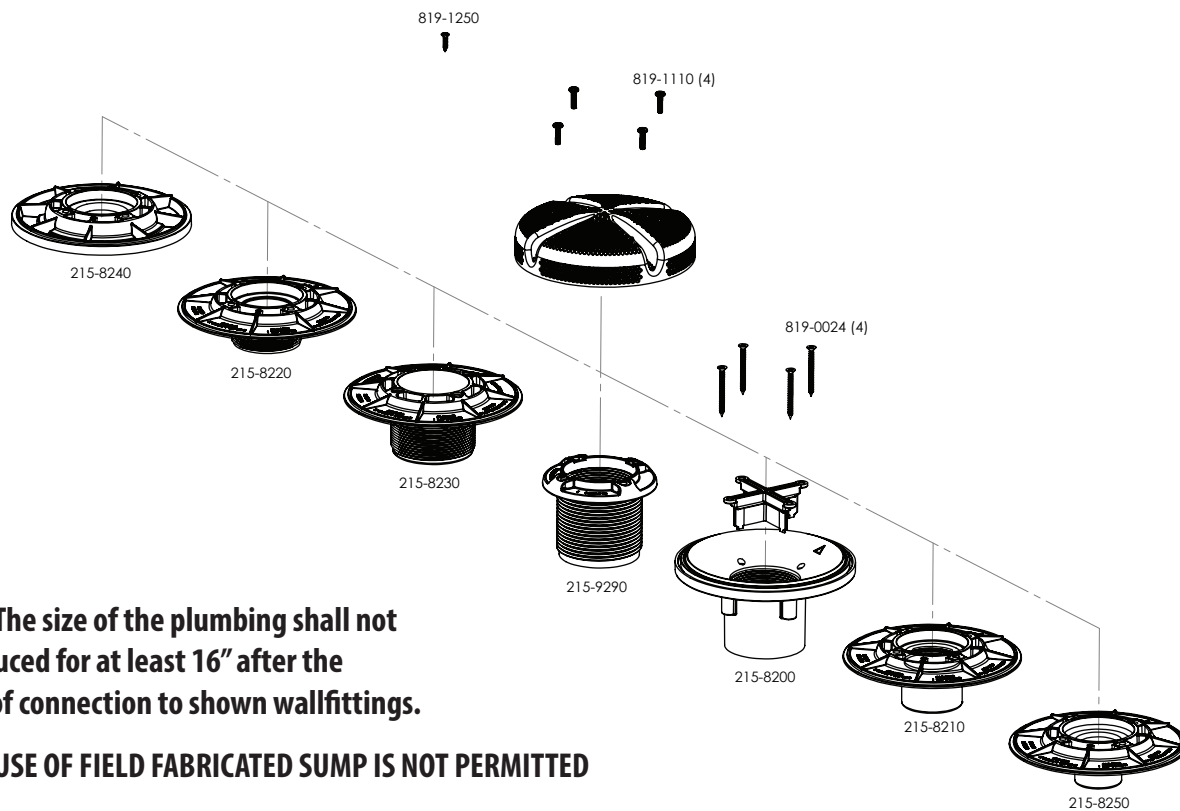
When the spa or hot tub is in operation, suction is created at this fitting. Users of the spa or hot tub must be instructed not to come in contact with this fitting in such a way as to block its orifice. If a user of the spa or hot tub blocks this fitting with his/her body, serious personal injury or drowning may occur.



**WARNING:** This is a PVC to PVC connection. Improper gluing or improper cement selection can cause leaks at glued connection which can result in property damage.



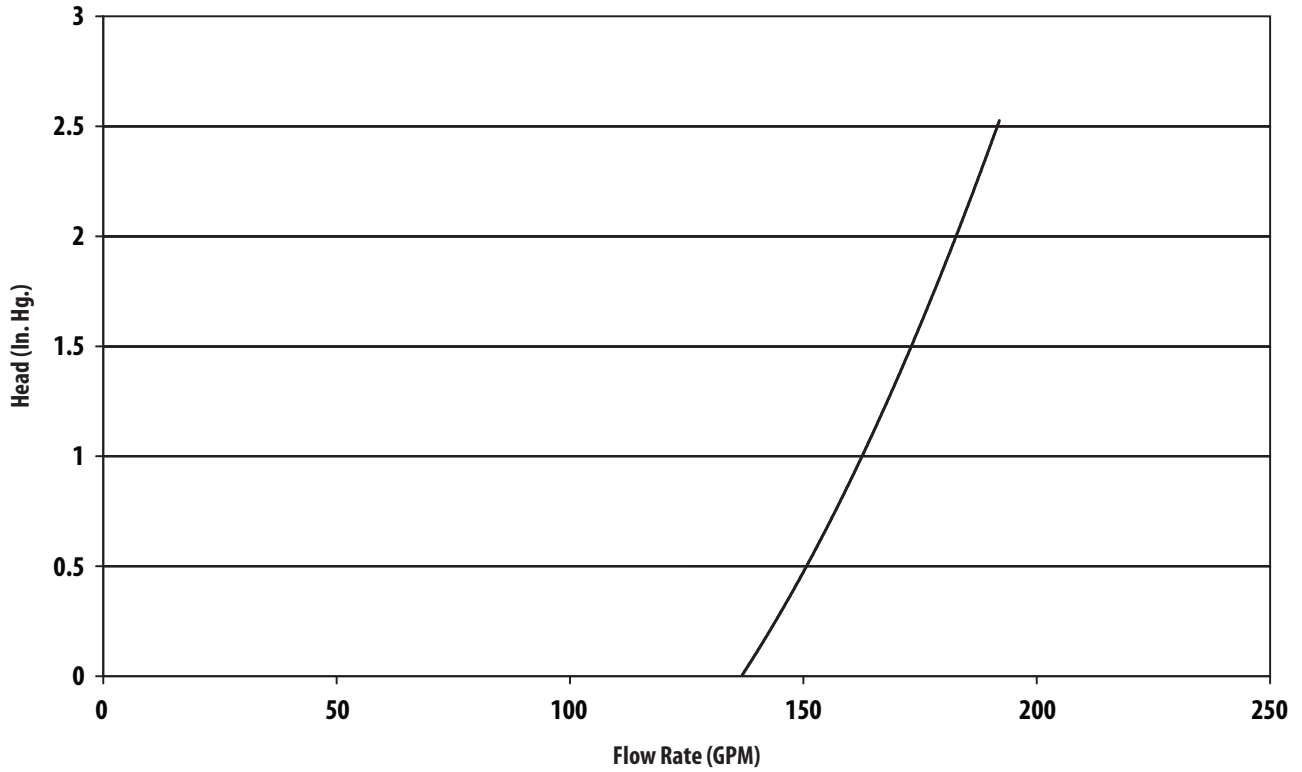
**WARNING:** Threaded adaptor must be permanently secured to wall fitting. Use supplied set screw to lock threaded adaptor to wall fitting.



**NOTE:** The size of the plumbing shall not be reduced for at least 16" after the point of connection to shown wallfittings.

**NOTE:** USE OF FIELD FABRICATED SUMP IS NOT PERMITTED

**640-82xx V Head Loss Curve**



**WARRANTY**

For product registration visit: [www.waterwayplastics.com](http://www.waterwayplastics.com).  
For Warranty questions or claims please contact point of purchase.