

# GRATE AND FRAME OWNER'S MANUAL

For Model Number: 640-477x V (18" x 18")

**VGB  
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.**

**SAVE THESE INSTRUCTIONS.**

## **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.

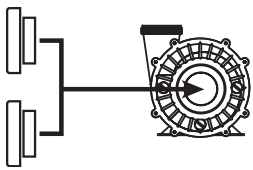
**USE ONLY GENUINE WATERWAY REPLACEMENT PARTS.**



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

[www.waterwayplastics.com](http://www.waterwayplastics.com) • [waterway@waterwayplastics.com](mailto:waterway@waterwayplastics.com)

## TO REDUCE THE RISK OF ENTRAPMENT HAZARDS:



- Use two or more suction fitting on each pump suction line. The suction fittings shall be separated by a minimum of 3 ft. (91.44 cm), or if any are located closer they shall be located on two different planes (i.e., one on the bottom and one on the vertical wall, or one each on two separate vertical wall).
- In the event of one suction outlet being completely blocked, the remaining suction outlets serving that system shall have a flow rating capable of the full flow of the pump(s) for the specific suction system.
- 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.

## 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 fitting is rated at 540 GPM. 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 pool, spa, or 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 pool, 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.**



**In order to remove the suction cover (for service or winterization), using a Phillips-head screw driver remove the screws. Inspect both the suction cover and suction fitting for any cracks or damages.**



**It is imperative to securely attach the suction cover to the wall fittings (use only the original supplied screws or obtain original replacements). Do not over tighten the screws. Inspection of fasteners and observation for damaged/tampered with suction fittings is required.**



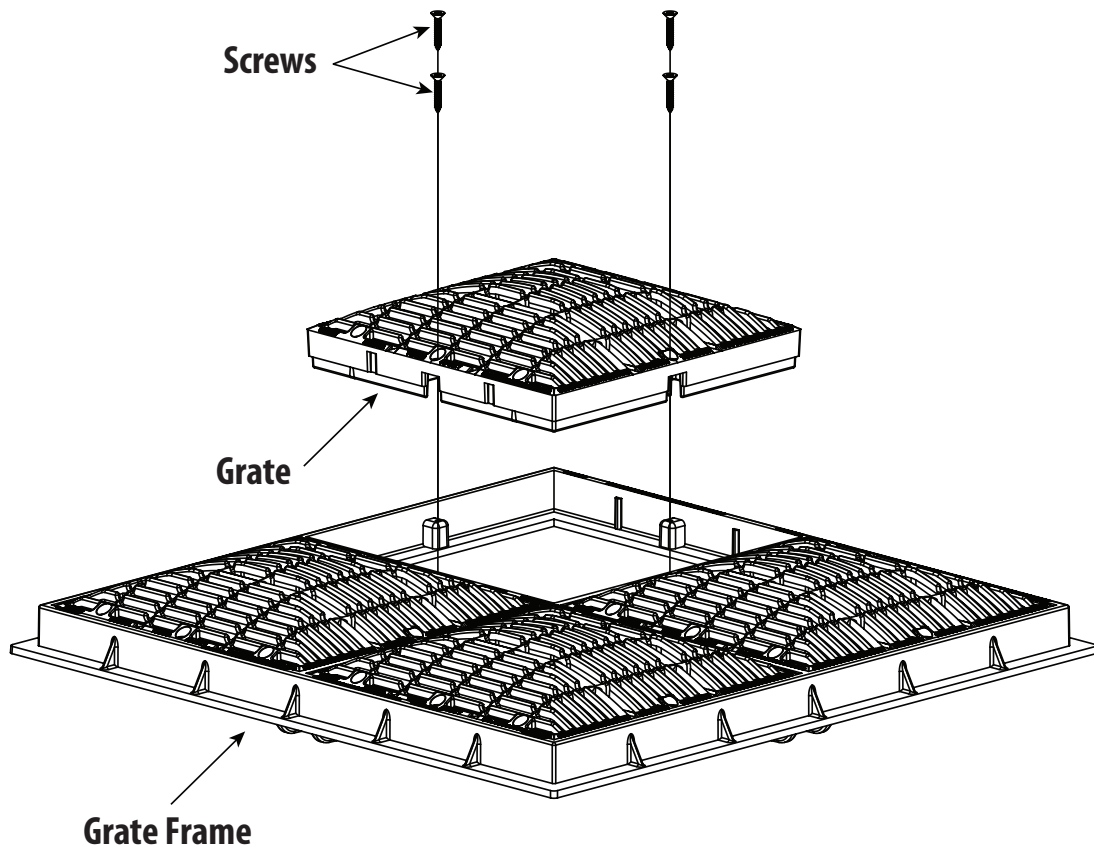
**Any and all broken or missing parts must be replaced prior to starting spa or pool pump. Never operate spa or pool without drain cover in place and properly affixed, death or serious injury can result.**



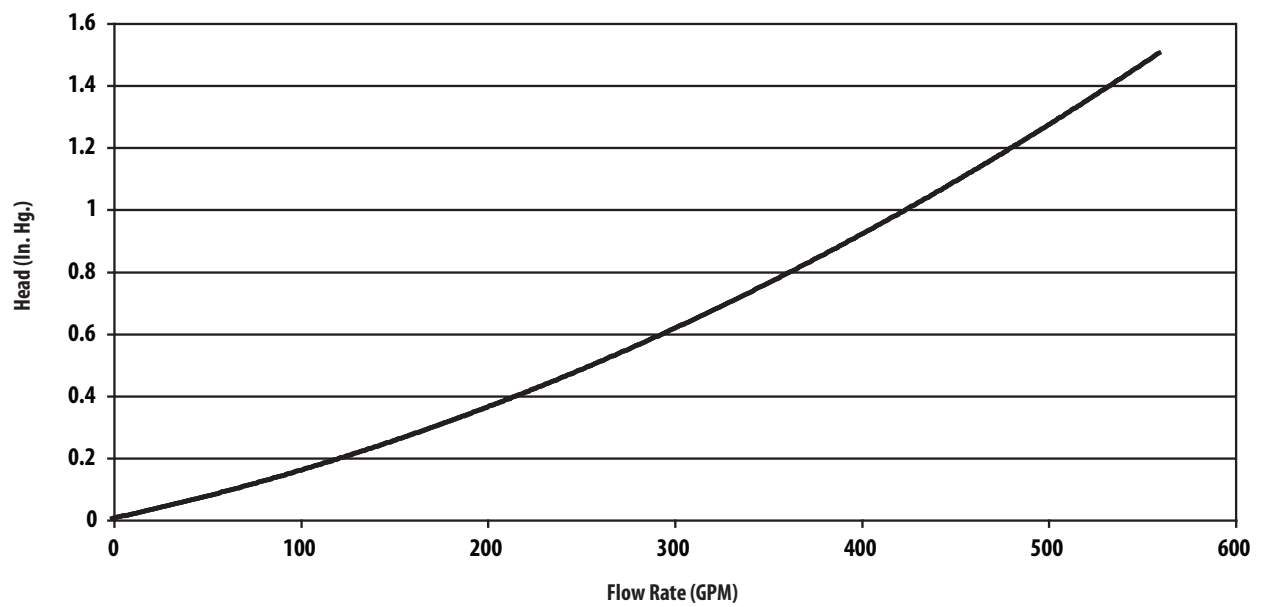
**Do not exceed the safe flow rate. Do not increase flow through system by increasing pump size or horsepower.**



**Do not allow children to sit, play or interact with main drains or suction outlet.**



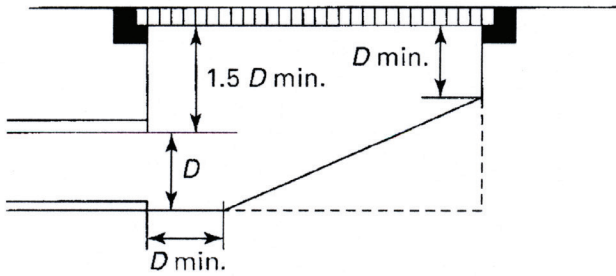
**Head Loss Curve - 18" x 18"**



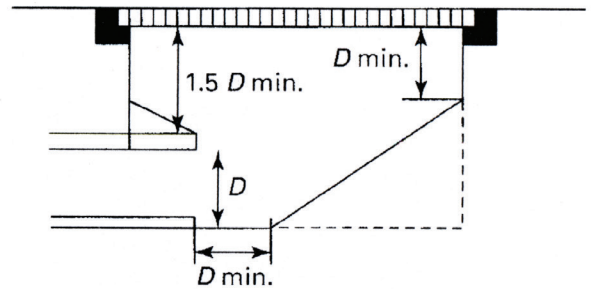
# INSTRUCTIONS FOR THE USE OF FIELD BUILT SUMPS

- Use 4" or larger PVC hose or pipe.

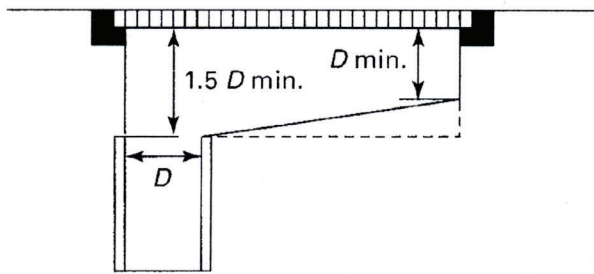
## FIELD BUILT SUMP



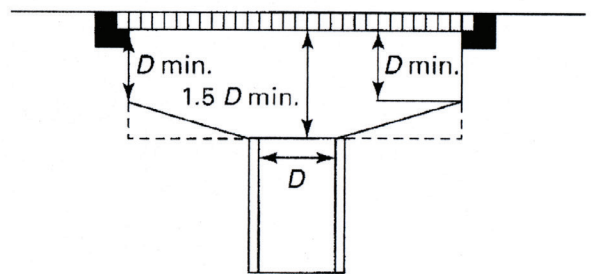
A



B



C



D

### GENERAL NOTES:

- (a)  $D$  = inside diameter of pipe.
- (b) All dimensions shown are minimums.
- (c) A broken line ( \_ \_ ) indicates suggested sump configuration.

The design of field fabricated sumps shall be further specified by a Registered Design Professional so as to fully address the considerations of cover/grate loadings, durability, hair, finger, and limb entrapment issues, as well as features particular to the site.

## LIMITED WARRANTY

Waterway Plastics manufactures its products and equipment in accordance with very high standards of workmanship. We use the best materials available and maintain the highest quality procedures practical in the industry. For Warranty, product must be registered at time of purchase/installation at [www.waterwayplastics.com](http://www.waterwayplastics.com). For Warranty claims or questions, please contact point of purchase.