

## WARNING / ATTENTION / AVISO



### Read and Follow All Instructions

**Failure to Follow Instructions can cause Severe Injury or Death.**

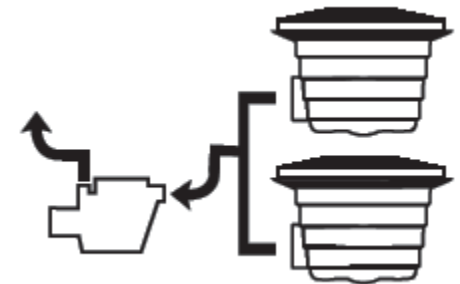
**Suction Entrapment Hazard:** Suction in suction outlets and/or suction outlet covers which are damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:

- **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 a potential for jewelry, swimsuits, 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 [1 meter] apart, from near point to near point.
- 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 backrests for such seating areas.
- The maximum system flow rate shall not exceed the rating of any listed (per ASME/ANSI A112.19.8M-1987, ASME A112.19.8M-2007) suction outlet cover installed.
- Never use 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.
- In addition to two or more suction outlets per pump installed in accordance with the latest APSP standards and CPSC guidelines, follow all National, State, and Local codes applicable.
- **CAUTION** – Do not exceed maximum flow rate stated on suction fitting. When replacing pump, use pump with similar flow curve and horsepower.



**WARNING / ATTENTION/ AVISO**



**LARGE AREA MAIN DRAINS  
INSTALLATION INSTRUCTIONS**

**FOR FIELD BUILT SUMPS FOR ALL SIZES OF 24" I-BAR  
FRAMES & GRATES FOR SUBMERGED SUCTION OUTLETS**

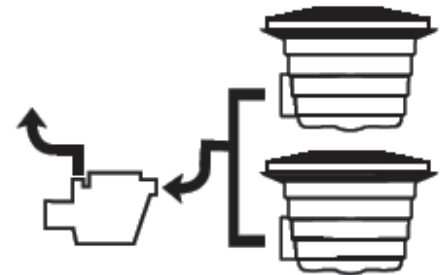
**Read Carefully BEFORE Installation**

**MAXIMUM RATED FLOW RATES; FLOOR: 810 GPM; WALL: 810 GPM**

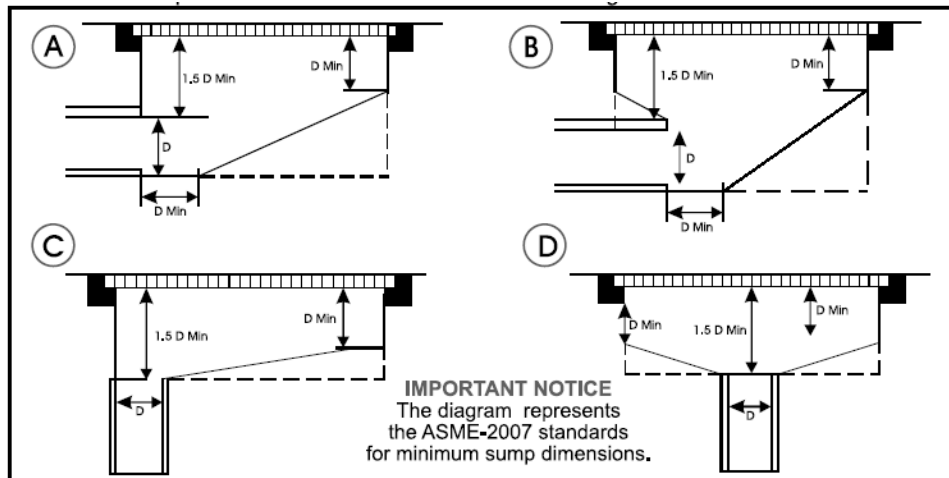
**Sumps must be approved as a complete system by registered design professional.**

Read instruction before installing. This cover must be properly installed using supplied brass screws. When using other than the supplied frame and fasteners, the design professional certifying the sump must also approve the type and installation of frame and fasteners used. Close pool immediately if cover breaks or becomes loose and replace with a new cover. Failure to maintain cover can result in severe injury or death.

1. Place the frame over the concrete formed pit. Drill 5/16" hole for receipt of stainless steel anchors.
2. Insert and tighten the brass, Phillips head screw in place to secure grate to the frame. Use only the fasteners supplied. Tighten screw to 30 in/lbs of torque.
3. It is suggested to place a board over the opening until the pool has been surfaced and ready to receive the grate.
4. Acceptable pipe size and location must be installed per diagram below and must maintain 1-1/2 times the pipe diameter below the bottom of the grate.
5. When winterizing, grate must be reinstalled per original installation instructions.
6. Read, then keep these instructions for future reference.



**IMPORTANT NOTICE:** Field-built sumps must be built in accordance with the diagram below.



**NOTES**

1. D = Inside diameter of pipe.
2. All dimensions shown are minimums.
3. A broken line indicates suggested sump configuration.

**CAUTION:** The suction fitting fasteners must be observed for damage or tampering before each use of this facility and/or at least annually.

Link to general certification of conformity to VGB 2008  
<http://www.lawsonaquatics.com/certification.htm>

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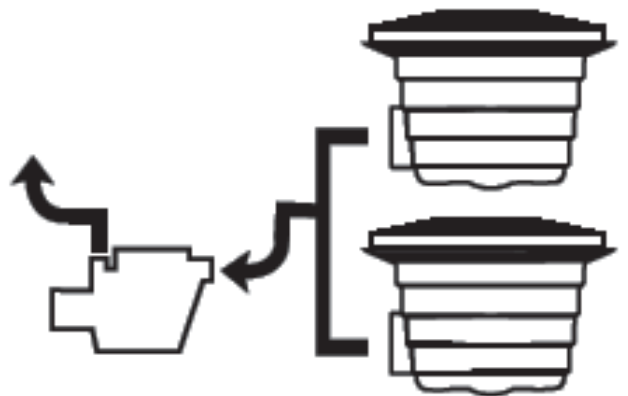
**LARGE AREA MAIN DRAINS  
GENERAL SAFETY GUIDELINES**

**FOR FIELD BUILT SUMPS FOR ALL SIZES OF 24" I-BAR  
FRAMES & GRATES FOR SUBMERGED SUCTION OUTLETS**

**Read Carefully BEFORE Installation**

If there are any doubts about the use, installation, and function of this product, always consult a registered design professional.

1. This product is for use as a submerged suction outlet for multiple or single drain use only.
2. When two or more suction fittings are used on a common suction line, they shall be separated by a minimum of 3 feet. If any are located closer, they shall be located on two different planes (on the bottom and vertical wall), or 2 separate vertical walls.
3. Do not locate suction outlets on seating areas or on the back rests of suction seating areas.
4. In the event that one suction outlet is completely blocked, the remaining suction outlets serving the system shall have a flow rating capable of the full flow of the pump(s) for the specific suction system.
5. These sumps are fitted with the appropriate side pipe fitting. The main suction pipe diameter may possibly need to be increased if the collector tank distance is more than 30 feet. Refer to a registered design professional.
6. If a field built sump is to be used, refer to the enclosed AMSE 112.19.8-2007 guidelines for correct sizing and formation of them. These are then to be certified by a registered design professional within the state of installation.
7. For use in floor or wall mounting positions only.
8. This grate/cover, **MD-FG-2424 and larger** is to be replaced after 10 installed years.
9. Many codes differ from ASME/ANSI A 112.19.8 2007 recommendations. It is the responsibility of the installer to choose the proper suction fitting for the application.



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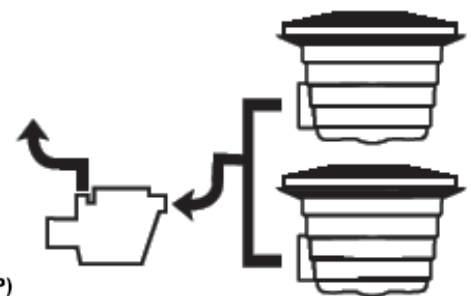
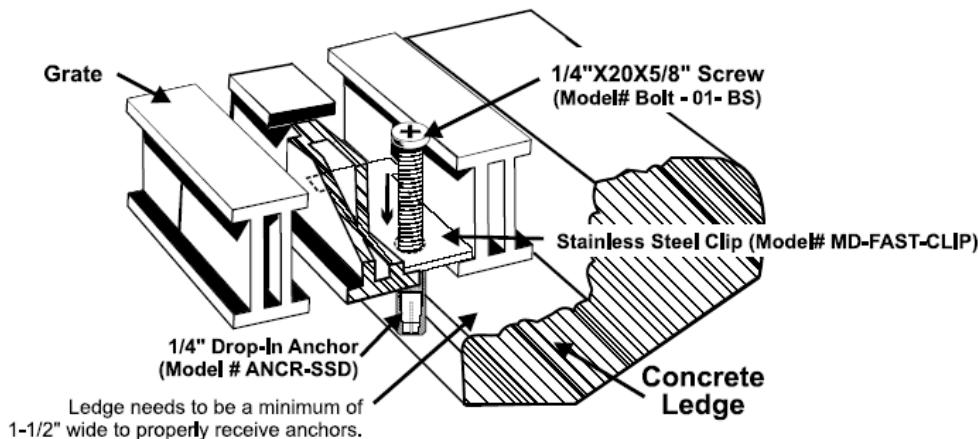
**LARGE AREA MAIN DRAINS  
GENERAL SAFETY GUIDELINES**

**FOR FIELD BUILT SUMPS FOR ALL SIZES OF 24" I-BAR  
FRAMES & GRATES FOR SUBMERGED SUCTION OUTLETS**

**Read Carefully BEFORE Installation**

Read instructions before installing. This cover must be properly installed using supplied stainless steel screws. When using other than the supplied frame and fasteners, the design professional certifying the sump must also approve the type and installation of frame and fasteners used. Close pool immediately if cover breaks or becomes loose and replace with a new cover. Failure to maintain cover can result in severe injury or death.

- When installing the grate without using the supplied frame, the grate must be anchored into a solid concrete base using the fasteners provided.
- Use grate to locate and mark the anchoring positions.
- Using a 5/16" concrete bit; drill the anchor holes to a depth of 1". Use caution. Do not over drill.
- Install the drop in stainless steel anchors supplied and set with the proper tool (not provided).
- Using a #2 phillips head screwdriver, install the grate and tighten the brass screws supplied to 30 in/lbs torque (1/4" X 20 x 5/8" – Model # BOLT-01-BS)
- Use the fasteners provided to insure a minimum of 3 complete turns into concrete anchor. Ensure screw heads are flush.
- Total head loss at maximum flow rate is less than 0.05 PSI.
- Anchor grate starting 2" from the corner on each side and every 20" maximum spacing.
- Ledge used to support the grating must be 1-1/2" wide at a minimum.



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