

*Installation Instructions for AV20X20  
General Purpose Suction Outlet for use with an Existing,  
Field fabricated, or Concrete Sump*

**IMPORTANT SAFETY INSTRUCTIONS  
READ, UNDERSTAND, AND FOLLOW ALL  
WARNINGS AND INSTRUCTIONS  
SAVE THESE INSTRUCTIONS**

PART # AV20X20 - MANUFACTURED BY EUREKA MANUFACTURING - SOFA IS CONSIDERED BLOCKABLE  
CERTIFIED FOR FLOOR = 400 GPM @ VELOCITY 1.46 F.P.S. - WALL = 348 GPM @ VELOCITY OF 1.27 F.P.S.  
SERVICE LIFE OF THE COVER ITSELF IS 20 YEARS - SERVICE LIFE OF THE HARDWARE IS 10 YEARS

1. 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
2. Any modification that increases the flowrate 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.
3. 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
4. All SOFA's shall be installed in accordance with the manufacturer's installation instructions. Installers to fill out the Spec Sheet. These instructions are for use with an Existing, Field Fabricated, or Concrete Sump. Do not use these instructions for new construction with a Eureka Mfg. sump. SOFA is blockable and can be used on a system with multiple sumps or a single sump system with an additional device or system to prevent suction entrapment.
5. Any field modification made to the SOFA not authorized by the manufacturer's installation instructions shall void the SOFA certification.
6. No modification shall be made to a SOFA structure or flow path unless the new configuration has been certified as a new SOFA.
7. Cover must be electrically bonded. See the additional Electrical Bonding Instructions sheet for the procedure.
8. Service life of the AV20X20 is 20 years, Service life of the hardware is 10 years. All components must be replaced at or before the end of their service life. Service life begins the month and year in which the grate is installed with or without water.
9. The AV20X20 requires no special winterization or service procedures. If any corrosion is present, remove the grate and clean with stainless steel tools and stainless steel cleaner.
10. The SOFA should be checked for damage and tampering each day before operation of the facility.
11. All SOFA components and fasteners receptacles shall be clean and free of debris or obstructions during installation and operation.
12. If any part of the SOFA is damaged or lost call the manufacturer for a replacement part.
13. Mounting surface around sump should be flat and void of any protrusions. Drop-in anchors need a minimum of 1" of concrete between the center of the anchor to the edge of the sump.
14. If an anchors threads become unusable try to shift cover slightly, re-drill the holes and install a new anchor. Always use thread lubricant when installing a s/s bolt to prevent galling.
15. The use of adhesives or other attachment methods that prevent access to suction piping or SOFA components requiring periodic servicing is prohibited. Only use the manufactures supplied components and hardware. All fasteners to be type 316 stainless steel.
16. When the cover is installed it shall not protrude more than 2" (51mm) from the finished surface of the pool in which the SOFA is installed.
17. Cover is approved for concrete pools with the use of the supplied anchors and stainless steel pools providing a stainless steel nut can be welded on backside of the pool floor. Tapped holes are not allowed.
18. SOFAs shall not be located on seats or the backrests for seats. Blockable SOFAs must be separated be three feet (center to center) or installed on different planes (floor and wall).



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**Title**  
INSTALLATION INSTRUCTIONS  
AV20X20 EXISTING, FIELD  
FABRICATED, OR CONCRETE SUMP

**Scale** NONE

**Drawing No.**  
AV20X20-EI  
PAGE 1

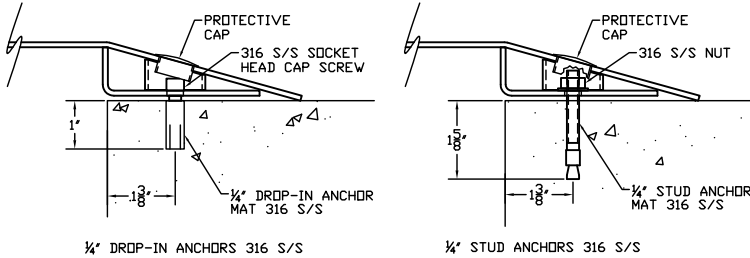
**Date** 08-18-21

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**Rev.** NONE

19. SOFA is certified to 400 gpm on floor installations and 348 gpm on wall installations, that shall NOT be exceeded anytime the pool is open to bathers. Compliance with this standard requires selecting and installing a combination of SOFA's such that the resulting individual suction system flow rating is greater than the pumping systems maximum system flow rate. With new construction a single blockable suction point is not allowed.
20. If one SOFA is disabled, add the flowrates of the the remaining SOFAS, that number must be greater than the pools required flowrate. On a system with a single suction point the rating of the cover must exceed the pumps max. flow
21. The sumps minimum opening size is 9" x 9", the maximum opening size is 12" x 12".
22. Acceptable pipe sizes are 4", 6", 8", 10", and 12".
23. DO NOT USE POWER TOOLS FOR GRATE INSTALLATION.
24. A General Certificate of Conformity is available at [eurekamanufacturing.com](http://eurekamanufacturing.com)

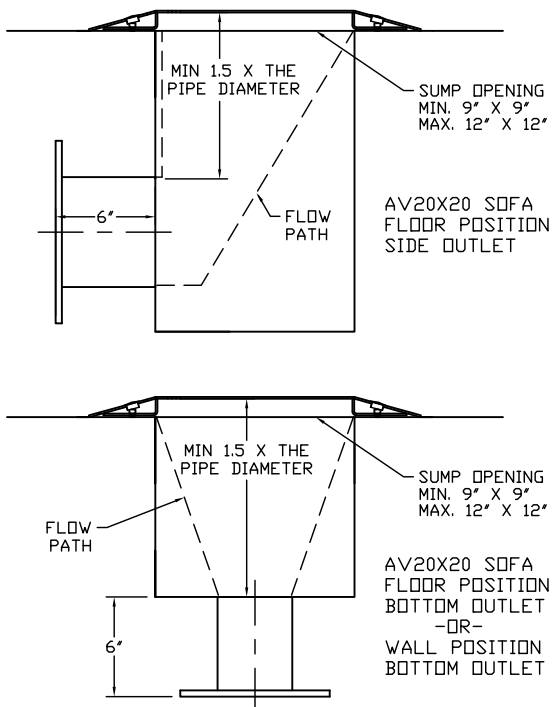
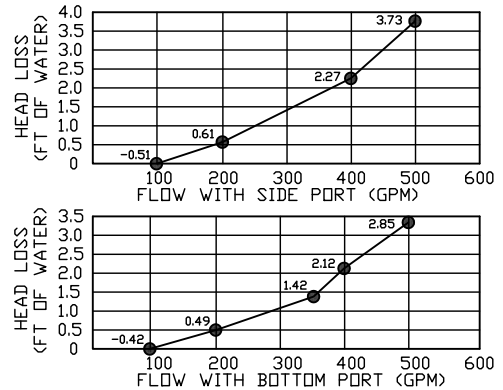


### TOOLS REQUIRED

1. Concrete Drill
2.  $\text{\O} \frac{3}{8}$ " Concrete Drill bit for Drop-in Anchors or  $\text{\O} \frac{1}{4}$ " concrete Drill bit for Stud Anchors
3.  $\frac{3}{16}$ " Allen Wrench for Drop-in Anchors or  $\frac{7}{16}$ " Socket and Wrench for Stud Anchors
4. Pencil or Marker and Hammer
5. Drop-in Anchor Setting Tool (provided)

### INSTALLATION PROCEDURE

1. This VGBA Cover must be electrically bonded. If not connected to a bonded frame or sump see the Electrical Bonding Instructions sheet.
2. Position the new s/s cover in place leaving minimum  $1\frac{3}{8}$ " between the center of the anchor hole and the edge of the sump.
3. Mark all anchor locations with pencil or marker. The cover itself can be used guide when drilling the anchor holes.
- 4a. For Drop-in Anchors drill  $\text{\O} \frac{3}{8}$ " holes 1" deep, check marks after each hole the drill bit may walk. Clean debris from holes when finished.
- 4b. For Stud Anchors drill  $\text{\O} \frac{1}{4}$ " holes  $1\frac{5}{8}$ " deep, check marks after each hole the drill bit may walk. Clean dust from holes when finished.
5. Place new cover over the anchor holes to confirm they are correctly placed and the fasteners will thread in place.
- 6a. Insert a Drop-in Anchor into each hole flush or slightly below the concrete and strike the internal pin with the supplied setting tool.
- 6b. Thread a nut onto the end of each Stud Anchor, flush with the end. Insert Stud Anchor into each hole, lightly tap anchor to set.
7. If there are any irregularities, (high or low points) in the pool floor the rope caulking must be used. Put cover in place and trace around the perimeter of the cover. Remove cover. Place rope caulking around perimeter with 75% of the caulking outside the perimeter line.
8. Cover will need to be electrically bonded either to a s/s sump or rebar within the concrete. A potting compound should be available from your supplier to encapsulate ground connections. Grounding wire should not interfere with the flowpath and should be fastened to the sump wall.
9. Put cover in place and apply anti-seize to all threaded fasteners.
10. Attach the fasteners to the anchors and torque to 5 foot pounds.
11. Insert the plastic caps into the access hole for each fastener.
12. If caulking was used, mold it to fit between the cover and floor. Trim excess caulking as needed.
13. Installer to fill out the Product Info. Label and give all paperwork to the facility.



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