

# Installation Guide










BaySaver Barracuda® S4, S6, S8 Concrete Installation Guide

June 2020

This installation guide is reference for installing the Barracuda S4, S6, S8 Water Quality Units into a precast concrete structure in the field.

The components of the Barracuda Concrete Package are as follows:



S4	 (4) Stainless Steel Funnel Mounting Flanges	 (1) Roll of Conseal	 (14) Concrete Anchor ¼ x 2¼"
S6	 (4) Stainless Steel Funnel Mounting Flanges	 (3) Roll of Conseal	 (14) Concrete Anchor ¼ x 2¼"
S8	 (8) Stainless Steel Funnel Mounting Flanges	 (4) Roll of Conseal	 (18) Concrete Anchor ¼ x 2¼"

Please check that all components are on site. Below is a list of tools that may be required for installation.

- 1/4" Diameter Carbide Tipped Concrete Bit
- Standard Electrical or Battery Operated Drill
- Adjustable Wrench
- Marker for writing on the concrete wall
- Hammer Drill for Concrete (Fits the 1/4" Diameter Concrete Drill Bit)
- 7/16" Driver or deep socket for installation of provided ¼" Concrete Wedge Anchors.
- Hammer
- Level
- Ladder that will extend to bottom of the structure
- Safety Glasses
- Hard Hat
- Protective Gloves
- Site Drawings
- ADS Design Layout



## Installation Instructions (These directions assume the manhole base and riser have been assembled, but that the top slab has not been set).

\*Do not insert the inlet or outlet pipes until after the Barracuda internals have been installed. If pipes must be inserted in advance, the pipes should not protrude into the structure as they will interfere with installation of the bowl.

1. Mount the four sets of teeth vertically inside the manhole sump. Using the engineer's plans or the ADS layout, determine the correct orientation for the plastic funnel outlet hole in relation to the outlet pipe (Figures 1 and 4). The first set of teeth will be mounted under the center of the outlet hole. Mark that location with a plumb vertical line, this will serve as the "12 o' clock" landmark in the manhole. Repeat this process to mark lines at the 3, 6, and 9 o' clock positions for a total of four.
2. Each kit includes four sets of teeth. Two of these sets are stamped with the letters A and C. The other two sets are stamped B and D. The ADS layout will label each tooth set location with the letter A, B, C, or D (Figure 4). You will install each set of teeth in the correct location, with the indicated letter facing up (figure 3). See Table 1 for the correct elevation for the top anchor location of each tooth set, measured from the sump floor. For example, for an S4 Barracuda the top anchor of an A or D indicated set of teeth will be 50" off the sump floor. Mark the top anchor elevations on each of your four vertical lines (figure 2), noting that A or D sets of teeth will be at a different height than B or C sets.
3. To fasten the sets of the teeth to the manhole, use the 1/4" concrete drill bit and drill holes approximately 1.25" deep at your marked top anchor locations. Using a hammer, lightly tap the concrete anchors into the drilled holes (figure 3). Hang the tooth set on the top anchor with the correct letter facing up and use a locking nut to loosely secure the tooth set to the wall (do not fully tighten the locking nut at this point). With the set of teeth hanging from the top anchor, line up and mark the bottom anchor location and drill the hole. Then hammer the bottom anchor in place and secure the teeth with a lock nut. Use an adjustable or socket wrench to tighten the top and bottom locking nuts so that the teeth are firmly secured to the wall (figure 5). Use the same process for all four sets of teeth.



Figure 1



Figure 2



Figure 3

Figure 4

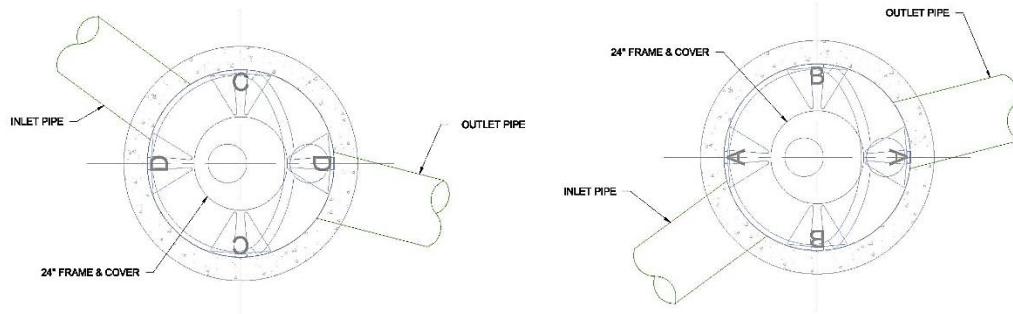


Figure 5

4. Next, you'll install mounting flanges for the Barracuda plastic funnel. These flanges need to be installed at the same height, as indicated by model in Table 1. For example, the anchor holes for S4 flanges should be drilled 77" from the sump floor. S4 and S6 models have four flanges and the need to be evenly spaced at 12, 3, 6, and 9 o'clock positions. S8 funnels require eight flanges that also need to be evenly spaced around the inside of the manhole. Use the same anchor procedure as before, using the 1/4" concrete drill bit to drill 1.25" deep holes. Hammer the anchors in place and use locking nuts to firmly secure the flanges (figure 6).
5. Lower the plastic funnel into the structure (figure 7), orienting the weir and outlet hole as depicted in the ADS layout (as identified in step 1). S6 and S8 units have eyebolts on the top of the funnel to assist in lifting. If the eyebolts are misplaced, S6 units have 3/8"-16 threads and S8 units utilize 1/2"-13 threads.
6. Next, you'll use Conseal to fill any gaps around the funnel. S6 and S8 units are provided with a metal funnel plug. This plug is placed in the funnel opening for worker safety and must be utilized ANYTIME SOMEONE ENTERS THE STRUCTURE. Unroll the Conseal and wedge it between the funnel and manhole to create a seal (figure 8). Conseal should also be used to seal between the vertical edges of the weir wall and the manhole. The plastic funnel can expand with high temperature. Installing the funnel during cooler parts of the day, or keeping the funnel shaded until installation can mitigate fitment issues. Once the Conseal is installed, the internal component installation is complete. The funnel plug may be discarded (if applicable), and the top slab can be set. If the application calls for a grated inlet, orient the slab so the grate is above the inlet (large bowl) side of the plastic funnel.

For maintenance details, please refer to the Barracuda Maintenance Manual. If the application requires a trash rack or oil boom, reference the appropriate supplementary installation instructions.



Figure 6



Figure 7



Figure 8

Table 1

	S4	S6	S8
Top Anchor Elevation from Sump Floor (A or D tooth indication)	50" (1270 mm)	58" (1475 mm)	74" (1880 mm)
Top Anchor Elevation from Sump Floor (B or C tooth indication)	60" (1525 mm)	68" (1725 mm)	90" (2285 mm)
Funnel Flange Anchor Elevation from Sump Floor	77" (1960 mm)	77" (1960 mm)	127" (3220 mm)

Note: distances can be +/- 1-2inches (25-50mm) from these locations for the A, D, B, and C teeth, but flange elevations should be adhered to as much as possible and can only be lowered a maximum of 1inch (25mm) from these values listed above. This guide is intended for field installations of Barracuda S4, S6, and S8 water quality units into precast manholes. For pre-casters installing internal components prior to jobsite delivery, contact ADS for possible modifications to component elevations.