Product Note 3.121
Re: BioDiffuser Standard, High Capacity, Bio 2 & Bio 3 Installation Guidelines
Date: December 1, 2004

The BioDiffuser chamber is an economical, easy to install alternative to the conventional on-site leachfield system. In a conventional on-site leachfield system, 4" pipe and gravel are used to fill the excavation. Chamber units reduce or eliminate the gravel, thereby eliminating many of the problems inherent in gravel systems: compaction, loss of storage, fines clogging the gravel. The open bottom of the chamber creates increased infiltrative surface area and a higher long-term acceptance rate. Because a narrower trench is used and the reduction factor applied when using chambers, a smaller footprint is needed resulting in a decrease in equipment, labor and real estate.

Trench Installation Guidelines

1. Excavate trench to proper width and depth as described in the design and as required by state and local code. A minimum of 12" of cover is recommended for all chambers. For Standard and High Capacity chambers, a 3' width trench is recommended as a minimum. For Bio 2, 18" minimum trench width is recommended and a 24" trench for Bio 3. See ADS Standard Details for more information.

2. Smooth irregularities in the excavation. A level, flat surface is required.

3. Assemble the BioDiffuser chambers in the trench excavation by engaging the "dome" end of the installing chamber over the "post" end of the chamber already in place. No screws required.

4. Knock out the scribed holes in the end cap of the first chamber unit and install distribution pipe from the distribution box or septic tank as described in the plan. Knockouts will accommodate either SDR 32.5, Schedule 40 or ADS-3000 Triplewall® pipe. Score the appropriate groove in the knockout with a knife before removing the plug with a shovel handle to create a 4.2" or 4.5" hole as required.

5. Place end plates on end units of the chamber line. Secure in places with backfill (no screws required).

6. Connect serial lines of the chambers in the same manner, where called for.

7. Fill sidewall area to top of chambers with native soil (or select fill where required). Coarse sand or fine gravel is recommended. Heavy clay, silt or debris shall not be included in the backfill.

8. "Walk in" fill to compact soil along the sides of the chamber. This is important to achieve load rating.

9. Complete the backfill of the system with native soil or select fill to the depth specified in the system design and as required by state and local codes. Avoid large rocks and debris in backfill material. Do **not** drive equipment over the BioDiffuser chambers installed in trench applications. For vehicular loading applications, all BioDiffuser chambers are approved for H-10 loading when installed with a minimum of 12" and a maximum of 3' of granular cover after consolidation.

Bed Installation

1. Excavate and level installation area. See ADS Standard Details for more information.

2. Smooth irregularities in the excavation. A level, flat surface is required.

3. Assemble the BioDiffuser chambers in adjacent rows to cover the desired area by placing the "dome" end of the installing chamber over the "post" end of the chamber already in place. No screws required.

4. A minimum of 6" separation is required between adjacent chamber footings.

5. Knock out the scribed holes in the end cap of the first chamber unit and install distribution pipe from the distribution box or septic tank as described in the plan. Knockouts will accommodate either SDR 35, Schedule 40 or ADS-3000 Triplewall® pipe. Score the appropriate groove in the knockout with a knife before removing the plug with a shovel handle to create a 4.2" or 4.5" hole as required.

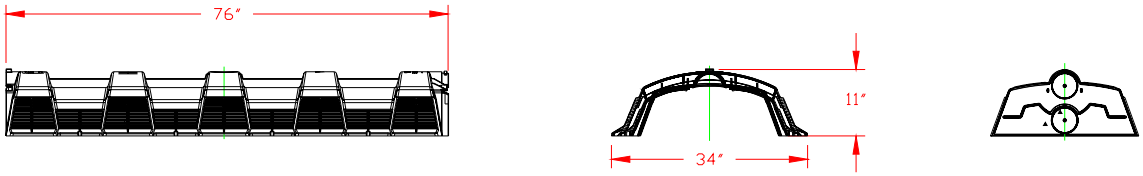
6. Place end plates on end units of the chamber line. Secure the end caps in place with backfill (no screws required). Connect distribution pipe in the knock-outs as required by plan.

7. Fill sidewall area to top of chambers with native soil (or select fill where required). Coarse sand or fine gravel may also be used; no heavy clay, silt or debris should be included.

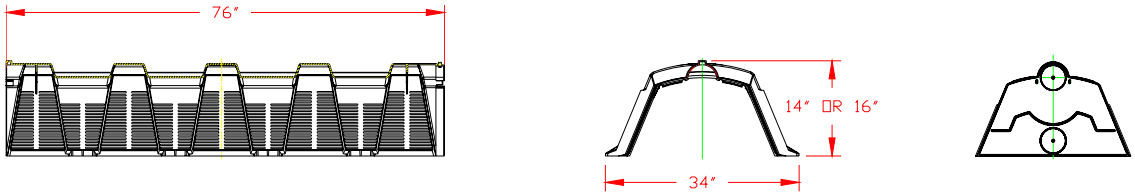
8. "Walk in" fill to compact soil along the sides of the chamber. Avoid large rocks and debris in the backfill material. Do not drive over the BioDiffuser chambers. Chambers must have a minimum of 12" and no more than 3' of cover.

BioDiffuser Chamber Specifications
See ADS Standard Details for additional information.

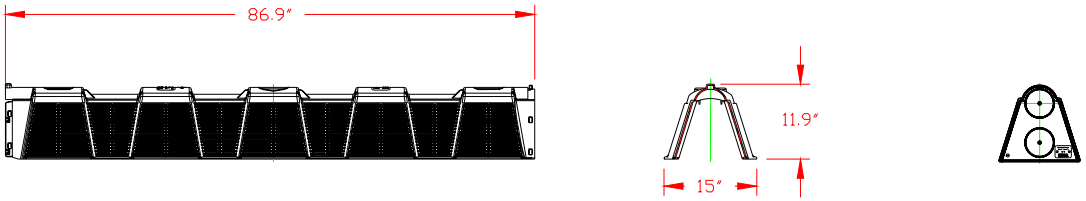
Standard Chamber



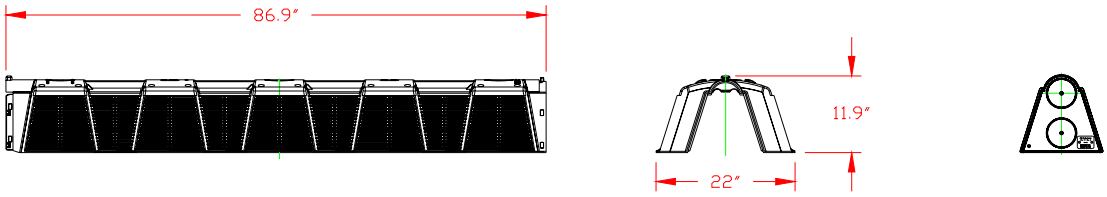
High Capacity Chamber



Bio 2 Chamber



Bio 3 Chamber



Chambers	11" Standard	14" High Capacity	16" High Capacity	Bio 2	Bio3
ADS Product #	1100BD	1400BD	1600BD	1500BD	2200BD
Width	34"	34"	34"	15"	22"
Height	11"	14"	16"	11.9"	11.9"
Length	76"	76"	76"	86.9"	86.9"
Invert Height	6.5"	9"	11.3"	6.87"	6.87"
Units/Pallet	29	36	45	90	60