

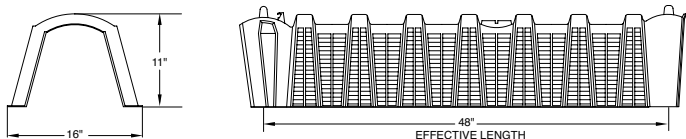
# Arc 18-4

## Installation Instructions

**Arc 18-4 Chambers may only be installed according to State and/or local regulations. If unsure of the installation requirements for a particular site, contact the local health department.**

Like conventional systems, the soil and site conditions must be approved prior to installation. Conduct a thorough site evaluation to determine the proper sizing and siting of the system before installation.

### Arc 18-4



#### MATERIALS AND EQUIPMENT NEEDED

- Arc 18-4 chambers (1812A4)
- MultiPort endcaps (Q4EQ24E)
- PVC pipe and couplings
- Backhoe
- Laser, transit or level
- Shovel and rake
- Tape measure
- Screwdriver or knife
- 4.25-inch or 4.5-inch Hole saw
- 1-1/4-inch drywall screws
- Screw gun
- Small valve-cover box\*
- 4-inch cap for Inspection port\*
- Invert adapter\*  
\*Optional

These guidelines for construction machinery must be followed during installation.

- Avoid direct contact with chambers when using construction equipment. Chambers require a 12-inch minimum of compacted cover to support a wheel load rating of 16,000 lbs/axle or equivalent to an H-10 AASHTO load rating.
- Only drive across the trenches when necessary. Never drive down the length of the trenches.
- To avoid additional soil compaction, never drive heavy vehicles over the completed system.

### EXCAVATING AND PREPARING THE SITE

**NOTE: As is the case with conventional systems, do not install the systems in wet conditions or in overly moist soils, as this causes machinery to smear the soil.**

1. Stake out the location of all trenches and lines. Set the elevations of the tank, pipe, and trench bottom.
2. Install sedimentation and erosion control measures. Install temporary drainage swales/berms to protect the site during rainfall events.
3. Excavate and level 18" to 24" wide trenches with proper center-to-center separation. Verify that the system is level or have the prescribed slope.

**NOTE:** Over excavate the trench width if the system will be contoured.

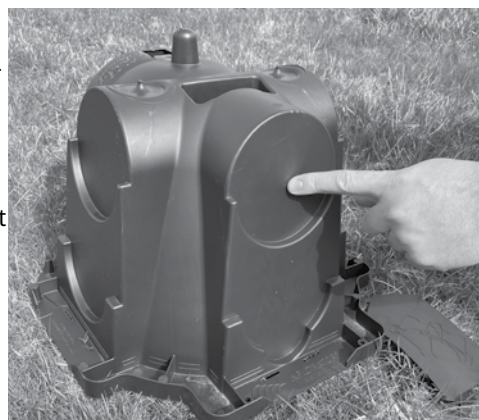
4. Rake the bottom and sides if smearing has occurred while excavating. Remove any large stones and other debris. Do not use the bucket teeth to rake the trench bottom.

**NOTE:** Raking to eliminate smearing is not necessary in sandy soils. In fine textured soils (silts and clays), avoid walking in the trench to prevent compaction and loss of soil structure.

5. Verify that each system is level using a level, transit, or laser.

### PREPARING THE ENDCAP

1. Identify the proper inlet location on the endcap and the outer diameter of the inlet pipe. Based on the pipe diameter select a properly sized hole saw to create the inlet opening. **NOTE:** that a 3.5-inch hole saw is required for a tight fit with 3-inch SCH40 pipe, a 4.25-inch hole saw is required for a tight fit with 4-inch SDR35 pipe, and a 4.5-inch hole saw is required for a tight fit with 4-inch SCH40 pipe.



1. Identify the proper inlet location on the endcap.

2. Using a cordless drill with the selected hole saw align the pilot drill on the hole saw with the drill point on the endcap inlet. Drill the hole taking caution to secure the endcap from moving during drilling.



2. Drill the hole on the endcap.

3. Snap off the molded splash plate located on the bottom front of the endcap.
4. Install splash plate into the appropriate slots below the inlet to prevent trench bottom erosion.
5. Insert the inlet pipe into the endcap at the beginning of the system. Extend the pipe into the endcap roughly 3 inches before reaching the stop. (Screws optional.)

## INSTALLING THE SYSTEM

1. Check the header pipe to be sure it is level or has the prescribed slope.

2. Set the invert height at 6, 9 or 10 inches as specified in the design from the bottom of the inlet.

**NOTE:** Use the Invert Adapter to achieve a 9" or 10" invert height.

3. Place the inlet end of the first chamber over the back edge of the endcap. Line up the notches on the bottom of each side of the endcap with the slots on the bottom edge of the chamber.

**NOTE:** If deemed necessary, Insert two 1 1/4" drywall screws on each side of the chambers.

4. Lift and place the end of the next chamber onto the previous chamber by holding it at a 90-degree angle. Line up the chamber end between the connector hook and locking pin at the top of the first chamber. Lower the chamber to the ground to connect the chambers.

**NOTE:** When the chamber end is placed between the connector hook and locking pin at a 90-degree angle, the pin will be visible from the backside of the chamber.

**NOTE:** The connector hook serves as a guide to ensure proper connection and does not add structural integrity to the chamber joint. Broken hooks will not affect the structure or void the warranty.

5. Swivel the chamber on the pin to achieve the proper direction for the trench layout.

**NOTE:** The chamber allows up to a 15-degree swivel in either direction at each joint.

6. Continue connecting the chambers until the trench is completed.

**NOTE:** As chambers are installed, verify they are level or have the prescribed slope.

7. The last chamber in the trench requires a MultiPort endcap. Lift the endcap at a 45-degree angle and insert the connector hook through the opening on the top of the endcap. Applying firm pressure, lower



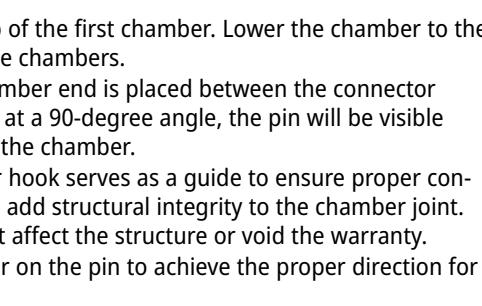
3. Place first chamber onto endcap.



Optional. Insert drywall screws.



4. Connect the chambers.



8. Attach endcap to chamber.

the endcap to the ground to snap it into place. Do not remove tear-out seal.

**NOTE:** Use straight lengths of pipe with the MultiPort endcap at the trench ends to create fitting-free looped ends.

9. To ensure structural stability, fill the sidewall area by pulling soil from the sides of the trench with a shovel. Start at the joints where the chambers connect. Continue backfilling the entire sidewall area, making sure the fill covers the louvers.

10. Pack down the fill by walking along the edges of the trench and chambers. This is an important step in assuring structural support.

**NOTE:** In wet or clay soils, do not walk in the sidewalls.

11. Proceed to the next trench and begin with Step 1.

## INSTALLING OPTIONAL INSPECTION PORTS

1. With a hole saw, drill the pre-marked area in the top of the chamber to create a 4-inch opening.

2. Set a cut piece of pipe of the appropriate length into the corresponding chamber's inspection port sleeve.

**NOTE:** The sleeve will accommodate up to a 4-inch SCH40 pipe.

3. Use two screws to fasten the pipe to the sleeve around the inspection port.

4. Attach a threaded cap or cleanout assembly onto the protruding pipe at the appropriate height.

5. A small valve cover box may be used if inspection port is below the desired grade.

## COVERING THE SYSTEM

**Before backfilling, the system must be inspected by a health officer or other official as required by State and local codes. Create an as-built drawing at this time for future records.**

1. Backfill the trench by pushing fill material over the chambers with a backhoe. Keep a minimum of 12 inches of compacted cover over the chambers before driving over the system.

**NOTE:** Do not drive over system while backfilling in sand.

**NOTE:** For shallow cover applications, you must mound 12 inches of soil over the system before driving over it, and then grade it back to 6 inches upon completion.

2. It is best to mound several inches of soil over the finish grade to allow for settling. This also ensures that runoff water is diverted away from the system.

3. After the system is covered, the site should be seeded or sodded to prevent erosion.

**NOTE:** If the system is for new home construction, it is important to leave marking stakes along the boundary of the system. This will notify contractors of the site location so they will not cross it with equipment or vehicles.

**NOTE:** Photos are for illustrative purposes only and may depict similarly designed chamber models not listed in these installation instructions.

Contact Infiltrator's Technical Services Department for assistance at  
1-800-221-4436 or [info@infiltratorwater.com](mailto:info@infiltratorwater.com)