The purpose of this manual is to provide the minimum specifications for design and installation of the Infiltrator ATL™ (Advanced Treatment Leachfield) System in Indiana. All local ordinances, requirements, and procedures must be followed. Each revised version of this manual supersedes the previous version.

The configurations presented in this document are common residential designs and are provided for illustrative purposes. They are not intended to restrict the use of other configurations, which may be utilized provided the design conforms to the latest edition of the Residential and Commercial Onsite Sewage Systems Rules (410 IAC 6- 8.3 and 410 IAC 6-10.1, respectively), as applicable.

For more detailed design information, please contact Infiltrator Water Technologies at 1-800-221-4436
Indiana Standards for Chamber Trench Soil Absorption Field Technology

These standards apply to chamber trench soil absorption field (SAF) technology for manufacturers that have demonstrated products that meet or exceed Indiana performance criteria (see list of Indiana approved manufacturers and chamber trench SAF products at the end of this document). Manufacturers of chamber trench SAFs not approved under these standards may submit a proposal for review by the Indiana State Department of Health (department).

I. Approval and Onsite Sewage System Construction Permit
   A. The department reviews, approves, and lists proprietary chamber trench SAF products when the manufacturer demonstrates that the product meets or exceeds the requirements contained in the department’s Protocols for Experimental Technologies.
   B. Before a local health department (LHD) may issue a construction permit for an onsite sewage system incorporating a chamber trench SAF, the specific manufacturer, brand, and model number must be included in the plan submittal and be a product listed at the end of this document.
   [Only the specific models listed in this document are approved. If models in a manufacturer's product line do not appear on the list, they are not approved for use.]

II. Application Standards
   A. Chamber trench SAFs must be designed and installed according to the manufacturer's requirements, in a manner that complies with 410 IAC 6-8.1 (including site evaluation, system selection and system size), 410 IAC 6-10, this approval, and local ordinances, requirements and procedures.
   B. Chamber trench SAFs may be used for:
      1. Gravity-flow distribution;
      2. Alternating field gravity flow distribution;
      3. Flood dose distribution; and
      4. Pressure distribution.

III. Chamber Standards
   A. Chamber trench SAFs must meet or exceed the following performance requirements:
      1. Chamber material must not decay, deteriorate, or leach chemicals or byproducts when exposed to sewage effluent and the soil environment.
      2. Chambers, when installed according to the manufacturer’s requirements, must:
         a. Meet or exceed the manufacturing and testing requirements of the International Association of Plumbing and Mechanical Officials (IAPMO) PS 63-99a, Material and Property Standard for Plastic Leaching Chambers for normal duty H-10 units; and
         b. Withstand the physical forces of the soil sidewalls, soil back-fill, and live loads associated with yard maintenance activities.
   B. The design of chambers must meet the following requirements:
      1. The distance from the infiltrative surface of the trench to the top of the chamber must be at least eight (8) inches.
      2. The void volume of a chamber system must be equal to or greater than the void volume of a conventional aggregate trench system.
3. The trench bottom area per foot of a chamber must be equal to or greater than ninety (90) percent of the trench bottom area per foot of a conventional aggregate trench.
4. Chamber units must interlock to form a complete trench with the width of the infiltrative surface maintained for the length of the trench.  
   [The use of pipe to connect chambers within a single trench is not allowed.]
5. The distal end of each trench must be fitted with a solid end plate that is mechanically interlocked to the end of the chamber.
6. Baffles or splash plates must be installed at the beginning of each chamber trench or be integral to the design of the inlet end plate [to reduce the velocity of incoming effluent and protect the trench bottom from erosion].
7. For gravity and flood dose SAFs, the bottom of the effluent sewer entering the inlet end plate must be at least three and three-tenths (3.3) inches above the trench infiltrative surface.
8. For trench pressure SAFs:
   a. Pressure distribution laterals must be fastened with the obvert of the pipe at least four (4) inches above the trench infiltrative surface; and
   b. The holes in the pressure distribution laterals must face up.

IV. SAF Design Standards

A. For chamber trench SAFs, LHDs and the department may permit a reduction in the required size of the SAF of up to twenty-five (25) percent of a full-sized trench SAF as required in 410 IAC 6-8.1 or 410 IAC 6-10.
B. SAF size reductions for chamber trench SAF products may not be combined with SAF size reductions for effluent quality listed in the Protocols for Experimental Technologies.

V. Requirements, Manufacturers and Installers

A. Each manufacturer’s Indiana specific design and installation manual, and revisions, must:
   1. Contain procedures for design and installation consistent with the requirements of 410 IAC 6-8.1, 410 IAC 6-10, and these standards; and
   2. Be reviewed and accepted by the department.
B. Each manufacturer must provide an Indiana specific design and installation manual to each installer of its chamber products, staff of the department, and staff of LHDs.
C. Each manufacturer must train each installer of its chamber products, and staff of the department and LHDs, on the design and installation of its products in accordance with its design and installation manual.
D. Each Installer must install chamber trench SAFs in compliance with the approved plan.

VI. List of Approved Chamber Products

<table>
<thead>
<tr>
<th>Advanced Drainage Systems (ADS), Inc.</th>
<th>Infiltrator Systems, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• BioDiffuser Standard</td>
<td>• Quick4 Equalizer 36 (22” wide)</td>
</tr>
<tr>
<td>• Bio 3 (22” wide)</td>
<td>• Quick4 Standard &amp; Quick4 Standard W</td>
</tr>
<tr>
<td>• ARC 36</td>
<td>• Quick4 Plus Standard</td>
</tr>
<tr>
<td>Hancor, Inc.</td>
<td>• Quick4 Plus Standard Low Profile (LP)</td>
</tr>
<tr>
<td>• EnviroChamber Standard</td>
<td></td>
</tr>
</tbody>
</table>

Approved: July 22, 2005
Effective: August 1, 2005
Revised: December 22, 2009

MICHAEL METTLER, DIRECTOR
ENVIRONMENTAL PUBLIC HEALTH DIVISION
INTRODUCTION

Quick4 Plus Standard Chambers
The Quick4 Plus Standard chamber can be installed in a 36-inch-wide trench. This chamber offers superior strength through its center structural columns. The Quick4 Plus All-in-One 12 Endcap is available with this chamber, providing increased flexibility in system configurations.

Quick4 Plus Standard LP Chambers
The Quick4 Plus Standard Low Profile (LP) chamber can be installed in a 36-inch wide trench. This chamber is 4 inches shorter in height than other standard models allowing for shallower installation where a shallow groundwater table, impervious conditions, or other restrictions limit vertical separation distance. The Quick4 Plus All-in-One 8 Encap and the Quick4 Plus 8 Endcap are available with this chamber, providing increased flexibility in system configurations.

Quick4 Plus All-in-One Endcaps
The Quick4 Plus All-in-One 8 Endcap and Quick4 Plus All-in-One 12 Encap may be used at the end of a chamber row or in-line with chambers. The in-line feature allows construction of chamber rows with a center feed, as an alternative to inletting at the ends of the chamber rows. Pipe connection options include the end, sides, or top.

Quick4 Plus 8 Endcap
The Quick4 Plus 8 Endcap is installed at the end of the Quick4 Plus Standard LP chamber and allows installation of a pipe from the end only. This endcap does not provide side-inletting capability. Pipe connection options include drill points for gravity or pressure pipe.

Quick4 Standard Chambers
The Quick4 Standard chamber has been replaced with the Quick4 Plus design. Design information for the Quick4 Standard chamber can be obtained by calling Infiltrator Water Technologies.

<table>
<thead>
<tr>
<th>Nominal Chamber Specifications</th>
<th>Quick4 Plus Standard Chamber</th>
<th>Quick4 Plus Standard Low Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (W x L x H)</td>
<td>34” x 48” x 12”</td>
<td>34” x 48” x 8”</td>
</tr>
<tr>
<td>Equivalency Rating</td>
<td>16.0 ft²/chamber</td>
<td>16.0 ft²/chamber</td>
</tr>
<tr>
<td>Storage</td>
<td>47 gal (6.3 ft³)</td>
<td>32.0 gal (4.3 ft³)</td>
</tr>
<tr>
<td>Inlet Invert Elevation</td>
<td>3.3” or 9.0”</td>
<td>5.3”, 8.0” or 12.7”</td>
</tr>
</tbody>
</table>

Contact Infiltrator Water Technologies 1-800-221-4436 for additional technical and product information.
PRODUCTS

Quick4 Plus Standard Chamber and Endcap System

SIDE AND END VIEWS
(not to scale)
(12" Minimum Cover)
(96" Maximum Cover)

QUICK4 PLUS ALL-IN-ONE 12 ENDCAP SIDE AND END VIEWS
(not to scale)

Quick4 Plus Standard Low Profile (LP) Chamber and Endcap System

SIDE AND END VIEWS
(not to scale)
(12" Minimum Cover)
(96" Maximum Cover)

QUICK4 PLUS ALL-IN-ONE 8 ENDCAP SIDE AND END VIEWS
(not to scale)

QUICK4 PLUS 8 ENDCAP SIDE AND END VIEWS
(not to scale)

Contact Infiltrator Water Technologies 1-800-221-4436 for additional technical and product information.
Quick4 Plus Periscope
The Quick4 Plus Periscope can be installed in the top of the Quick4 Plus All-in-One endcaps, allowing for increased inlet invert heights. This adapter facilitates mid-line piping connections as shown on page 10.

SIDE AND END VIEWS
(not to scale)
### SYSTEM SIZING

**Sizing of Quick4 Plus Chamber Systems**
These sizing charts are for residential systems. Commercial onsite systems may be sized per 410 IAC 6-10 with a 25% reduction in required size.

**TABLE 1: QUICK4 PLUS STANDARD AND QUICK4 PLUS STANDARD LOW PROFILE (LP) CHAMBER SIZING FOR 25% REDUCTION - MINIMUM NUMBER OF CHAMBERS AND TRENCH LENGTH**

<table>
<thead>
<tr>
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<tr>
<td>1.20</td>
<td>250</td>
<td>19</td>
<td>76</td>
<td>375</td>
<td>24</td>
<td>96</td>
<td>500</td>
<td>32</td>
<td>128</td>
<td>625</td>
<td>40</td>
<td>160</td>
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<tr>
<td>0.75</td>
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<td>100</td>
<td>600</td>
<td>38</td>
<td>152</td>
<td>800</td>
<td>50</td>
<td>200</td>
<td>1000</td>
<td>63</td>
<td>252</td>
</tr>
<tr>
<td>0.60</td>
<td>500</td>
<td>32</td>
<td>128</td>
<td>750</td>
<td>47</td>
<td>188</td>
<td>1000</td>
<td>63</td>
<td>252</td>
<td>1250</td>
<td>79</td>
<td>316</td>
</tr>
<tr>
<td>0.50</td>
<td>600</td>
<td>38</td>
<td>152</td>
<td>900</td>
<td>57</td>
<td>228</td>
<td>1200</td>
<td>75</td>
<td>300</td>
<td>1500</td>
<td>94</td>
<td>376</td>
</tr>
<tr>
<td>0.30</td>
<td>1000</td>
<td>63</td>
<td>252</td>
<td>1500</td>
<td>94</td>
<td>376</td>
<td>2000</td>
<td>125</td>
<td>500</td>
<td>2500</td>
<td>157</td>
<td>628</td>
</tr>
<tr>
<td>0.25</td>
<td>1200</td>
<td>75</td>
<td>300</td>
<td>1800</td>
<td>113</td>
<td>452</td>
<td>2400</td>
<td>150</td>
<td>600</td>
<td>3000</td>
<td>188</td>
<td>752</td>
</tr>
</tbody>
</table>

* Systems should be oriented as long and narrow as the site permits in accordance with the requirements of 410 IAC 6-8.1. For example, four 96 foot-long trenches are preferred over six 64 foot-long trenches (both systems provide 384 feet of total trench length).

**Note:**
1. The recommended minimum number of chambers is 19 Quick4 Plus Standard or Quick4 Plus Standard LP chambers.
2. The chart is to be used with Infiltrator Water Technologies Quick4 Plus Standard and Quick4 Plus Standard LP chambers only, substitutions for other products are not permitted.
3. The connected Quick4 Plus Standard and Quick4 Plus Standard LP chamber length is 4.0 ft. (per chamber). Add length to each trench for endcaps. See Products Section for the lengths of Quick4 Plus endcaps.
CHAMBER CONFIGURATIONS

Conventional Gravity Trench Configurations

TYPICAL CROSS SECTION
(not to scale)

TYPICAL SIDE AND END INLET PLAN VIEW
(not to scale)

NOTE: A dose tank is required when field is in excess of 500 LF.
Conventional Gravity Trench Configurations

TYPICAL ALTERNATING FIELD PLAN VIEW
(not to scale)

Note: A dose tank is required when either side of the field is in excess of 500 LF.
CHAMBER CONFIGURATIONS

Mid-line Connection Configuration

TYPICAL PLAN VIEW
(not to scale)

NOTE: A dose tank is required when field is in excess of 500 LF.

Flood Dose Trench Configuration

TYPICAL PLAN VIEW
(not to scale)
Turn Design Configuration

Contour Swivel Connection™

Quick4 Plus chambers feature the Contour Swivel Connection, which allows systems to be installed on contour on sloping sites while avoiding obstructions. The chamber easily follow contours or an “S” curve, avoiding obstacles without additional parts or accessories. The Quick4 Plus Standard and Quick4 Plus Standard LP chamber connection swivels 10 degrees right or left.

TYPICAL PLAN VIEW
(not to scale)
Gravity Systems

Before You Begin

These instructions are for the installation of Quick4 Plus Standard and Quick4 Plus Standard LP chambers in Indiana. These chambers may only be installed according to 410 IAC 6-8.1 and department standards, and local health department ordinances and procedures.

If unsure of the installation requirements for a site, contact your local health department. If unsure of the use of Quick4 Plus Standard and Quick4 Plus Standard LP chambers, contact Infiltrator Water Technologies. The soil and site evaluation and the design of the onsite system must be reviewed, and a construction permit obtained from the local health department before installation.

NOTE:

Excavating and Preparing the Site

Before You Begin

These instructions are for the installation of Quick4 Plus Standard and Quick4 Plus Standard LP chambers in Indiana. These chambers may only be installed according to 410 IAC 6-8.1 and department standards, and local health department ordinances and procedures.

If unsure of the installation requirements for a site, contact your local health department. If unsure of the use of Quick4 Plus Standard and Quick4 Plus Standard LP chambers, contact Infiltrator Water Technologies. The soil and site evaluation and the design of the onsite system must be reviewed, and a construction permit obtained from the local health department before installation.

Materials and Equipment Needed

- Quick4 Plus chambers
- Quick4 Plus 8 Endcaps
- Quick4 Plus All-in-One 8 or All-in-One 12 Endcaps
- PVC pipe and couplings
- Backhoe
- Laser, transit or level
- Tape Measure
- Shovel and rake
- Utility knife
- 1.25-inch drywall screws
- Screw gun
- Small valve-cover box
- 4-inch cap Inspection port
- 4.25-inch hole saw
- 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.
- When installing in sandy soil conditions, wheeled construction equipment is prohibited from crossing trenches during backfilling. Use of tracked vehicles is approved and recommended with only 6" of cover.
- Avoid stones larger than 3 inches in diameter in backfill. Remove stones this size or larger that are in contact with chambers.

Preventing Erosion and Wandering

- Install sedimentation and erosion control measures. Temporary drainage swales/berms may be installed to protect the site during rainfall events.
- Excavate and level 36"-wide trenches with proper center-to-center separation. Verify that trenches are level.
- Note: Over excavate the trench width in areas where you are planning to contour.
- 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.
- Verify that each trench is level using a level, transit, or laser.

Preparing the Endcap

**NOTE:** Quick4 Plus and Quick4 Plus All-in-One endcaps are available for use with the Quick4 Plus chambers on either end of the trench, depending upon installer’s preference and configuration requirements.

1. With a hole saw drill an opening appropriate for pipe diameter being used on front or side of endcap using center point marking as a guide.
2. Snap off the molded splash plate located on the bottom front of the endcap.
3. Install splash plate into the appropriate slots below the inlet to prevent trench bottom erosion.

**QUICK4 PLUS ALL-IN-ONE 8 ENDCAP INLET OPTIONS**

(not to scale)

1. Drill endcap.

**QUICK4 PLUS ALL-IN-ONE 12 ENDCAP INLET OPTIONS**

(not to scale)
INSTALLATION INSTRUCTIONS

Installing the Quick4 Plus Periscope

NOTE: Available for use with Quick4 Plus All-in-One 8 or All-in-One 12 Endcap only. Invert options based on system design.

1. With a hole saw drill the pre-marked area on top of the Quick4 Plus All-in-One Endcap.

2. Insert the Quick4 Plus Periscope into the top of the Quick4 Plus All-in-One 8 or 12 Endcap. Insert the Quick4 Plus Periscope until it snaps into place.

3. Insert a 4” Schedule 40 PVC pipe into the Quick4 Plus Periscope at the appropriate locations for the system design.

4. Rotate Quick4 Plus Periscope to desired angle.

5. Insert inlet pipe.

6. Connect chambers.

7. Swivel chambers.

8. Continue connecting chambers until the trench is completed.

9. Place endcap outlet end.

NOTE: When the chamber end is placed between the connector hook and locking pin at a 45-degree angle, the pin will be visible from the back side of the chamber.

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

NOTE: Available for use with Quick4 Plus All-in-One 8 or All-in-One 12 Endcap only. Invert options based on system design.

10. 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.

11. Pack down fill by walking along the edges of trench and chambers.

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

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

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

9. The last chamber in the trench requires an endcap. Lift the endcap at a 45-degree angle and align the connector hook on the top of the chamber with the raised slot on the top of the endcap. Lower the endcap to the ground and into place.

Note: Place a few shovels of soil around the endcap to secure it during backfill.

10. 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.

11. Pack down fill by walking along the edges of trench and chambers.

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

12. Proceed to the next trench and begin with Step 1.
INSTALLATION INSTRUCTIONS

Installing Quick4 Plus All-in-One 8 and Quick4 Plus All-in-One 12 Endcaps as a Mid-line Connection

1. With a hole saw drill an opening appropriate for the pipe diameter being used on the side (3.3” invert) or on top (9.0” invert) of Endcap.

Note: Piping configurations are determined by the preference of the installer or designer.

2. With a hole saw, drill an opening on the end of the Quick4 Plus All-in-One 8 Endcap to create an opening aligned with the bottom of the endcap. This will allow effluent to fill both sides of the chamber line.

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. Place the back edge of the endcap over the inlet end of the first chamber. Be sure to line up the locking pins on the top of both chamber and endcap.

6. Insert connection pipe 2.5 inches into opening on endcap.

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 the inspection port is below the desired grade.

Chamber Inspection Port

1. With a hole saw drill the pre-marked area in the top of the chamber to create a 2.5-inch opening.

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

NOTE: Sleeve will accommodate up to a 2-inch Schedule 40 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 the inspection port is below the desired grade.

Installing Optional Inspection Ports

Inspection ports may be installed on the chamber, the Quick4 Plus All-in-One 8 Endcap or the Quick4 Plus All-in-One 12 Endcap. The Quick4 Plus 8 Endcap does not allow inspection port construction.

Endcap Inspection Port

1. With a hole saw drill the pre-marked area in the top of endcap to create a 4 1/3 to 4 1/2-inch opening based on pipe type.

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

NOTE: Sleeve will accommodate up to a 4-inch Schedule 40 pipe.

Chamber Inspection Port

1. With a hole saw drill the pre-marked area in the top of the chamber to create a 2.5-inch opening.

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

NOTE: Sleeve will accommodate up to a 2-inch Schedule 40 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 the 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 consolidated cover over the chambers before driving over the system.

Note: Do not drive over the system while backfilling in sand.

2. It is best to mound several inches of soil over the finished grade to allow for settling, creating a slightly crowned surface. This 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 system location so they will not cross it with equipment or vehicles.
Flood Dose Systems

In a flood dose onsite system, the effluent is pumped to a distribution box which receives a predetermined dose volume of effluent. It is then gravity fed to the soil absorption field and distributed to the chamber trenches. In a flood dose onsite system, the effluent is gravity fed as shown in the figure below.

FIGURE 2: FLOOD DOSE ONSITE SYSTEM
INSTALLATION INSTRUCTIONS

Pressure Systems
Before You Begin

These instructions are for the installation of Quick4 Plus Standard and Quick4 Plus Standard LP chambers in Indiana. These chambers may only be installed according to 410 IAC 6-8.1 and department standards, and local health department ordinances and procedures.

If unsure of the installation requirements for a site, contact your local health department. If unsure of the use of Quick4 Plus Standard and Quick4 Plus Standard LP chambers, contact Infiltrator Water Technologies. The soil and site evaluation and the design of the onsite system must be reviewed, and a construction permit obtained from the local health department before installation.

Installing the Chambers and Endcaps

Note: Pressurized systems can be constructed with either the Quick4 Plus 8 Endcap, the Quick4 Plus All-in-One 8 or All-in-One 12 Endcap, or the Quick4 Plus All-in-One 12 Endcap.

1. The Quick4 Plus All-in-One 12 Endcap is compatible with the Quick4 Plus Standard chamber. The Quick4 Plus All-in-One 8 Endcap and Quick4 Plus 8 Endcap are compatible with the Quick4 Plus LP chambers.

Note: Endcap photos shown throughout this document are for demonstrative purposes only. The endcap being used may differ and is dependent upon the chamber being used and system design.

2. To allow pressure laterals to drain after each dose, drill a hole in the bottom of the pipe at the end of the pressure line. Place the snap-off splash plate or a paving block at the bottom of the trench to protect infiltrative surface from erosion.

3. With a hole saw, drill out the appropriate diameter hole to accommodate the pressure lateral pipe.

4. Insert the pressure lateral pipe into the endcap’s drilled opening and slide it into the manifold pipe. Glue the pressure lateral pipe to the manifold pipe.

5. With the pressure lateral pipe through the endcap, place the back edge of the endcap over the inlet end of the first chamber. Be sure to line up the locking pins on the top of both the chamber and endcap.

Note: Health departments may require a wet-run pressure check to be done prior to chamber installation when the pipe is laying on the ground. Check with your local health department for the proper procedure.

6. Secure the pressure lateral pipe to the top of the first chamber with a plastic pipe strap at the outlet end of the unit. Slide the strap up through a slot in the chamber top, down through the other slot, and cinch the two ends around the pipe.

7. Lift and place the next chamber onto the previous one at a 45-degree angle. Line up the chamber end between the connector hook and locking pin at the top of the first chamber. Lower it to the ground to engage the interlocks.

8. Secure the lateral pipe to the top of the next chamber once in place. Follow the same method in Step 5.

9. Continue interlocking chambers and securing the pipe until the trench is completed.

10. Before attaching the final endcap, it may be necessary to remove the tongue of the connector hook on the last chamber with a pair of pliers depending on your pipe diameter.

11. Insert the pressure lateral pipe through the hole in the final endcap and slide the endcap toward the last chamber. Lift the endcap over the modified connector hook and push straight down to secure it to the chamber.

Materials and Equipment Needed

- Quick4 Plus chambers
- Quick4 Plus 8 Endcaps
- Quick4 Plus All-in-One 8 or All-in-One 12 Endcaps
- PVC pipe and couplings
- Backhoe
- Laser, transit or level
- Tape Measure
- Shovel and rake
- Utility knife
- 1.25-inch drywall screws*
- Screw gun
- Hole saw 1 1/2” or 2 1/2”
- Small valve-cover box*
- 4-inch cap Inspection port
- Plastic pipe straps

*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.
- When installing in sandy soil conditions, wheeled construction equipment is prohibited from crossing trenches during backfilling. Use of tracked vehicles is approved and recommended with only 6” of cover.
- Avoid stones larger than 3 inches in diameter in backfill. Remove stones this size or larger that are in contact with chambers.

3. Drill pressure pipe hole.

5. Place endcap over inlet end.

NOTE: If clean-out extensions are required, use a hole saw to cut a hole in the top of the Quick4 Plus All-in-One 8 Endcap or Quick4 Plus All-in-One 12 Endcap so the pressure lateral pipe with an elbow can extend to the ground surface. For clean-out access, use the “Installing Optional Inspection Ports” section in the general installation instructions.

12. If installing multiple rows of chambers, follow Steps 1-9 to lay the next row of chambers parallel to the first. Keep a minimum separation distance between each row of chambers as required by local code.

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

Note: The chamber allows up to 10-degree swivel in either direction at each joint.

8. Continue connecting chambers until the trench is completed.

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

9. The last chamber in the trench requires an endcap. Lift the endcap at a 45-degree angle and align the connector hook on the top of the chamber with the raised slot on the top of the endcap. Lower the endcap to the ground and into place.

Note: Place a few shovels of soil around the endcap to secure it during backfill.

10. 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.

11. Pack down fill by walking along the edges of trench and chambers.

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

12. Proceed to the next trench and begin with Step 1.
TW SERIES SEPTIC TANKS

The TW Series Septic and Pump Tanks by Infiltrator Water Technologies come in six different sizes: TW-300, TW-500, TW-1250, and TW-1500. These tanks may be used as a septic or pump tank, except for the TW-300 and TW-500, which may only be used as pump tanks. Tanks come in single or dual compartment configurations (except for the TW-300 and TW-500) and include access port lids and 4” diameter pipe grommets that accommodate SDR 35 or Schedule 40 pipe. Inlet and outlet tees are optional. Note: Installation instructions are provided with each tank.

**TW-300 Nominal Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>TW-300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>50”D x 50”H</td>
</tr>
<tr>
<td>Working Volume</td>
<td>300 gal</td>
</tr>
<tr>
<td>Access Port (1)</td>
<td>24”</td>
</tr>
</tbody>
</table>

**TW-500 Nominal Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>TW-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>62.5”D x 51”H</td>
</tr>
<tr>
<td>Working Volume</td>
<td>500 gal</td>
</tr>
<tr>
<td>Access Port (1)</td>
<td>24”</td>
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</table>

**TW-1250 Nominal Specifications**

<table>
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<tr>
<th>Specification</th>
<th>TW-1250</th>
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</thead>
<tbody>
<tr>
<td>Size</td>
<td>66”W x 143.7”L x 50.6”H</td>
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<tr>
<td>Working Volume</td>
<td>1250 gal</td>
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<tr>
<td>Access Ports (2)</td>
<td>24”</td>
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**TW-1500 Nominal Specifications**

<table>
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<th>Specification</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Size (W x L x H)</td>
<td>66”W x 170.4”L x 50.6”H</td>
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<tr>
<td>Working Volume</td>
<td>1500 gal</td>
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<tr>
<td>Access Ports (2)</td>
<td>24”</td>
</tr>
</tbody>
</table>
AQUAWORX CONTROL PANELS

The Aquaworx Intelligent Pump Control (IPC) Panels provide an innovative approach to pump control. Relying on an embedded microprocessor in the pump controller and a floatless pressure transducer in the pump chamber, the IPC Panels monitor liquid levels, control pumping time intervals, and log events in real-time. The IPC line of panels is designed for timed dosing but can easily be set up to accommodate demand dosing. The IPC Panel utilizes the Mountable and Removable Controller (MARC™) as the user interface to collect system data and transfer it to a PC-based application using a Scan Disk (SD) card.

Benefits Include:

Pressure Transducer Technology
- Eliminates the troubles associated with floats
- Accurate to 0.1 of an inch
- Single wire reduces installation time and eliminates the need for a junction box

Mountable and Removable Controller (MARC)
- Simple and logical user interface
- Removable to protect against tampering
- Single unit may be used on multiple pumps

Data Logging
- Records real-time events including pump run time, which can be used to calculate flow volume
- SD card records up to 4,000 events

Micro Processor
- Circuit board allows for time dosing to extend system performance

Solid-State Relay Technology
- Provides a soft ramp up of power
- Eliminates the hard start and noise of a motor contactor

MODELS:

Simplex IPC Panel
The Simplex IPC Panel has the ability to time control a single pump. This panel comes with a MARC.

Duplex IPC Panel
The Duplex IPC Panel has the ability to control two pumps in an alternating design with independent timing. This panel comes with MARC.

Sand Filter IPC Panel
The Sand Filter IPC Panel has the ability to time control two individual pumps having independent level sensors, allowing for a design which will simultaneously time dose a treatment system and drainfield. This panel comes with a MARC.
WARRANTY

(a) Infiltrator warrants that each Quick4 Standard chamber and endcap manufactured by Infiltrator (collectively, the “Units”), when installed and operated in a leachfield of an onsite septic system of a single family residence in accordance with Infiltrator’s instructions, for a period of five (5) years from the date of installation (i) shall be free from defective materials and workmanship; and (ii) shall perform in such a manner to absorb effluent within the design flow rate for the septic system containing the Units, so that there will be no sewage backup into the dwelling or structure which uses the septic system, or visible pooling of effluent around the system. The presence of such sewage backup or such visible pooling shall constitute a “Failure” of the system. This Limited Warranty covers new, permitted leachfield installations only, and does not cover extensions or additions to existing leachfields. This Limited Warranty extends only to the original purchasing contractor. For this Limited Warranty to apply, the Units must be installed in accordance with all necessary permits and in accordance with all site conditions required by state and local codes for the installation of gravel and pipe systems, and must be sized according to Infiltrator specifications and state, county and local requirements.

In order to exercise these Limited Warranty rights, the warranty holder must notify Infiltrator in writing at its corporate headquarters in Old Saybrook, Connecticut within fifteen (15) days of any alleged defect or Failure. The notice shall be accompanied by (i) a copy of the appropriate permit for the septic system; and (ii) proof to Infiltrator’s satisfaction that the septic tank has been pumped at least once every three (3) years since installation. Upon notification of a possible breach of warranty, Infiltrator may undertake an investigation of the circumstances of the possible breach. In its discretion, Infiltrator may perform tests to determine the cause of any breach and may hire a soil scientist or professional engineer or use Infiltrator personnel to evaluate soil conditions and otherwise assist in the investigation.

In the event that Infiltrator determines that there has been a breach of this Limited Warranty due to a Failure, Infiltrator will, at its option, either: provide Units as it deems necessary to extend the size of the leachfield and a fee of $8.00 per Unit toward the cost of installation; or provide an equivalent, state-approved solution to cure the breach. Infiltrator will not be responsible for pumps or any other necessary mechanical devices needed to extend or repair the leachfield following a Failure, nor shall Infiltrator be liable for the addition of pump systems or underground water diversion systems, or repair or replacement of any landscape or irrigation systems, following a Failure.

(b) This Limited Warranty and all remedies in subparagraph (a) are exclusive. There are no other warranties to the original purchasing contractor with respect to the Units, including no implied warranties of merchantability or fitness for a particular purpose.

(c) This Limited Warranty shall be void if any part of the chamber system (chamber, endcap or other accessory) is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the warranty holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to Acts of God; ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground cover set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the warranty holder fails to comply with all of the terms set forth in this Limited Warranty, including the information required by subparagraph (a).

Furthermore, in no event shall Infiltrator be responsible for any loss or damage to the warranty holder, the Units, or any third party resulting from installation (except as expressly set forth in subparagraph (a) or shipment, or from product liability claims of the warranty holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes, all other applicable laws, and Infiltrator’s written instructions.

(d) No representative of Infiltrator has the authority to change this Limited Warranty in any manner whatsoever, or to extend this Limited Warranty. No warranty applies to any party other than the original purchasing contractor.