On-Site Leaching Chamber
Specifications & Features

Design & Installation Manual – North Carolina
This manual provides general design and installation information for Arc/BioDiffuser Leaching Chambers.

This manual contains a brief description for each chamber model and general design and installation procedures. For more detailed information please contact customer service at 1-800-733-0535.

For CAD drawings, refer to our website: www.arc-chamber.com.

All Arc/BioDiffuser chamber configurations and installations must comply with state and local rules.

Contents

Introduction 2

Product Specifications
  Arc 36 System 4
  Arc 36 HC System 6
  11" Standard System 8
  Arc 24 System 10
  Bio 3 System 12

Installation Instructions 14-15

Standard Installations 16-17

Additional System Configurations 18-21
  Serial Configuration 18
  Serial Configuration - Side Port Coupler 19
  Fill System 19
  Pump System - Pressure Distribution 20
  Pump System - Pressure Dispersal 21

System Sizing Charts 22-23
INCLUDED SYSTEMS

Arc 36 System
- 34" Wide Chamber
- New Lightweight Design with Articulating Joints
- H–10 load rated with proper installation.
  See Pages 4-5

Arc 36 HC System
- 34" Wide Chamber
- New Lightweight Design with Articulating Joints
- H–10 load rated with proper installation.
  See Pages 6-7

11" Standard System
- 34" Wide Chamber
- H–10 load rated with proper installation.
  See Pages 8-9

Arc 24 System
- 22" Wide Chamber
- New Lightweight Design with Articulating Joints and Pivot Lockout Feature
- H–10 load rated with proper installation.
  See Pages 10-11

Bio 3 System
- 22" Wide Chamber
- H–10 load rated with proper installation.
  See Pages 12-13
Before beginning installation, please note the following engineered features of the Arc 36 model chambers and end caps.

**Arc 36 System**

- Each chamber end is either marked “Dome” or “Post” on the round observation/vent knockout ports. These indicate direction of assembly, dome over post.

**Arc 36 Chamber**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>63”</td>
</tr>
<tr>
<td>Repeat Length</td>
<td>60”</td>
</tr>
<tr>
<td>Overall Width</td>
<td>34”</td>
</tr>
<tr>
<td>Sidewall Height</td>
<td>7.13”</td>
</tr>
<tr>
<td>Overall Height</td>
<td>13”</td>
</tr>
<tr>
<td>Capacity</td>
<td>8.04 cu ft (60.14 gal)</td>
</tr>
</tbody>
</table>

Calculations and dimensions are nominal.

**Arc 36 Chamber—Top, Side, and End Views** (not to scale)

**Arc 36 End Cap—Side, and End Views** (not to scale)
**ARC 36 SYSTEM**

**Arc 36 Features**
- The post and dome creates a positive lock securing the chambers for final engagement. Lock and drop feature for faster installation.
- The Arc 36 chamber feet are designed with an extra large surface area to provide support, particularly in sandy soils.
- Sidewall louvers are designed to allow effluent to exit the chamber sidewalls in high flow situations, while preventing soils from migrating into the chamber void.
- Observation/venting knockout ports provide for inspection of system performance as well as a convenient location for drain field ventilation pipes.
- Each chamber end has small knockouts on the roof positioned in the “Post” end joint. When removed, these knockouts allow for the use of zip ties to support piping in dosing systems.

**Arc 36 Universal End Cap**
- Upper and lower knockouts accommodate both Schedule 40 and SDR 35 piping. Dimples are also offered for the positioning of hole saw pilot drills.
- End caps are designed to attach to the chamber’s dome or post end in the same fashion for each end with the Arc 36 logo facing outward.

**Arc 36 Swivel Feature**
- The engagement mechanism of the Arc 36 chamber is designed to allow for a pivot between joined chambers of up to 10° in either direction.

**Arc 36 Side Port Coupler (SPC)**
- SPC component snaps in place to allow side entry at any joint throughout the trench line. This accessory provides a variety of design and installation options. Refer to pages 17 for design configurations.

**Arc 36 System Configurations**
- Trench Installation: Page 16
- Bed Installation: Page 17
- Additional Configurations: Pages 18-21
ARC 36 HC SYSTEM

Before beginning installation, please note the following engineered features of the Arc 36 HC model chambers and end caps.

**Arc 36 HC System**

**Arc 36 HC Chamber**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>63”</td>
</tr>
<tr>
<td>Repeat Length</td>
<td>60”</td>
</tr>
<tr>
<td>Overall Width</td>
<td>34”</td>
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<tr>
<td>Sidewall Height</td>
<td>10.75</td>
</tr>
<tr>
<td>Overall Height</td>
<td>16”</td>
</tr>
<tr>
<td>Capacity</td>
<td>10.7 cu ft (80 gal)</td>
</tr>
</tbody>
</table>

Calculations and dimensions are nominal.

**Arc 36 HC Chamber—Top, Side, and End Views** (not to scale)

**Arc 36 HC End Cap—Side, and End Views** (not to scale)
ARC 36 HC SYSTEM

Arc 36 HC Features

- The post and dome creates a positive lock securing the chambers for final engagement. Lock and drop feature for faster installation.
- The Arc 36 HC chamber feet are designed with an extra large surface area to provide support, particularly in sandy soils.
- Sidewall louvers are designed to allow effluent to exit the chamber sidewalls in high flow situations, while preventing soils from migrating into the chamber void.
- Observation/venting knockout ports provide for inspection of system performance as well as a convenient location for drain field ventilation pipes.
- Each chamber end has small knockouts on the roof positioned in the "Post" end joint. When removed, these knockouts allow for the use of zip ties to support piping in dosing systems.

Arc 36 HC Universal End Cap

- Upper and lower knockouts accommodate both Schedule 40 and SDR 35 piping. Knockouts can be removed with a knife or hole saw. Dimples are also offered for the positioning of hole saw pilot drills.
- End caps are designed to attach to the chamber’s dome or post end in the same fashion for each end with the Arc 36 logo facing outward.

Arc 36 HC Swivel Feature

- The engagement mechanism of the Arc 36 chamber is designed to allow for a pivot between joined chambers of up to 10° in either direction.

Arc 36 HC Side Port Coupler

- Side Port Coupler component snaps in place to allow side entry at any joint throughout the trench line. This accessory provides a variety of design and installation options. Refer to pages 22 and 23 for design configurations.

Arc 36 HC System Configurations

- Trench Installation: Page 16
- Bed Installation: Page 17
11" STANDARD SYSTEM

Before beginning installation, please note the following engineered features of the 11" Standard model chambers and end caps.

11" Standard System

- Each chamber end is either marked “Dome” or “Post” on the round observation/vent knockout ports. These indicate direction of assembly, dome over post.

<table>
<thead>
<tr>
<th>11&quot; Std Chamber</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>76&quot;</td>
</tr>
<tr>
<td>Repeat Length</td>
<td>75&quot;</td>
</tr>
<tr>
<td>Overall Width</td>
<td>34&quot;</td>
</tr>
<tr>
<td>Sidewall Height</td>
<td>6.35&quot;</td>
</tr>
<tr>
<td>Overall Height</td>
<td>11&quot;</td>
</tr>
<tr>
<td>Capacity</td>
<td>9.21 cu ft (68.42 gal)</td>
</tr>
</tbody>
</table>

Calculations and dimensions are nominal.

11" Standard Chamber — Top, Side, and End Views (not to scale)

11" Standard End Cap — Side, and End Views (not to scale)
11" STANDARD SYSTEM

11" Standard Features
• The post and dome creates a positive lock securing the chambers for final engagement.
• The 11" Standard chamber feet are designed with an extra large surface area to provide support, particularly in sandy soils.
• Sidewall louvers are designed to allow effluent to exit the chamber sidewalls in high flow situations, while preventing soils from migrating into the chamber void.
• Observation/venting knockout ports provide for inspection of system performance as well as a convenient location for drain field ventilation pipes.
• Each chamber end has small knockouts on the roof positioned in the "Post" end joint. When removed, these knockouts all for the use of zip ties to support piping in dosing systems.

11" Standard Universal End Cap
• Upper and lower knockouts accommodate both Schedule 40 and SDR 35 piping. Dimples are also offered for the positioning of hole saw pilot drills.
• End caps are designed to attach the chamber’s dome or post end.

11" Standard System Configurations
• Trench Installation: Page 16
• Bed Installation: Page 17
• Additional Configurations: Pages 18-21
**ARC 24 SYSTEM**

Before beginning installation, please note the following engineered features of the Arc 24 model chambers and end caps.

**Arc 24 System**
- Each chamber end is either marked “Dome” or “Post” on the round observation/vent knockout ports. These indicate direction of assembly, dome over post.

<table>
<thead>
<tr>
<th>Arc 24 Chamber</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>67&quot;</td>
</tr>
<tr>
<td>Repeat Length</td>
<td>60&quot;</td>
</tr>
<tr>
<td>Overall Width</td>
<td>22&quot;</td>
</tr>
<tr>
<td>Sidewall Height</td>
<td>7.5&quot;</td>
</tr>
<tr>
<td>Overall Height</td>
<td>12&quot;</td>
</tr>
<tr>
<td>Capacity</td>
<td>5.02 cu ft (37.5 gal)</td>
</tr>
</tbody>
</table>

Calculations and dimensions are nominal.

**Arc 24 Chamber — Top, Side, and End Views** (not to scale)

**Arc 24 End Cap — Side, and End Views** (not to scale)
ARC 24 SYSTEM

Arc 24 Features
- Base flanges on the chambers ends over lock during final engagement to form a very strong joint.
- The Arc 24 chamber feet are designed with an extra large surface area to provide support particularly in sandy soils.
- Sidewall louvers are designed to allow effluent to exit the chamber sidewalls in high flow situations, while preventing soils from migrating into the chamber void.
- Observation/venting knockout ports provide for inspection of system performance as well as a convenient location for drain field ventilation pipes.
- Each chamber end has small knockouts on the roof positioned in the “Post” end joint. When removed, these knockouts all for the use of zip ties to support piping in dosing systems.

Arc 24 End Cap
- Upper and lower knockouts accommodate both Schedule 40 and SDR 35 piping. Dimples are also offered for the positioning of hole saw pilot drills.
- End caps are designed to attach the chamber’s dome or post end.

Arc 24 Swivel Feature
- Each chamber’s post end has swivel lockout tabs at either base flange. When removed, the incoming chamber will turn up to ten degrees in the direction of the removed lockout tab. Without removal of the swivel lockout tab, the chambers will align in a straight pattern.
- Swivel lockout tabs may be removed with a striking blow to the tab and then peeling off the remaining piece of plastic.

Arc 24 Side Port Coupler (SPC)
- SPC component snaps in place to allow side entry at any joint throughout the trench line. This accessory provides a variety of design and installation options. Refer to page 17 for design configurations.

Arc 24 System Configurations
- Trench Installation: Page 16
- Bed Installation: Page 17
- Additional Configurations: Pages 18-21
Before beginning installation, please note the following engineered features of the Bio 3 model chambers and end caps.

**Bio 3 System**

- Each chamber end is either marked “Dome” or “Post” on the round observation/vent knockout ports. These indicate direction of assembly, dome over post.

<table>
<thead>
<tr>
<th>Bio 3 Chamber</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length</strong></td>
</tr>
<tr>
<td><strong>Repeat Length</strong></td>
</tr>
<tr>
<td><strong>Overall Width</strong></td>
</tr>
<tr>
<td><strong>Sidewall Height</strong></td>
</tr>
<tr>
<td><strong>Overall Height</strong></td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
</tr>
</tbody>
</table>

Calculations and dimensions are nominal.

**Bio 3 Chamber — Top, Side, and End Views (not to scale)**

**Bio 3 End Cap — Side, and End Views (not to scale)**
BIO 3 SYSTEMS

Bio 3 Features

• Base flanges on the chambers ends over lock during final engagement to form a very strong joint.
• The Bio 3 chamber feet are designed with an extra large surface area to provide support, particularly in sandy soils.
• Sidewall louvers are designed to allow effluent to exit the chamber sidewalls in high flow situations, while preventing soils from migrating into the chamber void.
• Observation/venting knockout ports provide for inspection of system performance as well as a convenient location for drain field ventilation pipes.
• Each chamber end has small knockouts on the roof positioned in the "Post" end joint. When removed, these knockouts all for the use of zip ties to support piping in dosing systems.

Bio 3 Universal End Cap

• Upper and lower knockouts accommodate both Schedule 40 and SDR 35 piping. Dimples are also offered for the positioning of hole saw pilot drills.
• End caps are designed to attach the chamber’s dome or post end.

Bio 3 System Configurations

• Trench Installation: Page 16
• Bed Installation: Page 17
• Additional Configurations: Pages 18-21
ARC/BIODIFFUSER LEACHING SYSTEMS: INSTALLATION PROCEDURES

Preparation

- Excavate to proper width and depth as described in the system plans, design and/or permit. All excavations must comply with state and local rules as well as the appropriate NC DERN system approval.
- Smooth irregularities in the excavation and clear rocks and debris from the bottom surface area. For trench installations, the bottom is recommended to be level, but no greater than one-inch of fall is allowed per 100 feet. For bed installations, the bottom shall be level and there shall be a 1-3 inch separation between chamber lines measured from the edge of the chamber.

Installation

- Installation of the any ADS/Hancor Arc/BioDiffuser leaching system begins with laying the first chamber onto the prepared bottom surface area, with the “dome” end of the chamber at the header end of the excavation. Each additional incoming chamber is then installed by placing its dome over the post of the chamber already in place.

A slight tug of the chamber will “lock” the joint to the previously installed chamber. Once “lock” engagement occurs, “drop” (lower) the incoming chamber into place.

- As the incoming chamber is lowered down onto the excavation bottom, the two chambers fully engage in a straight-line pattern creating a very strong joint.

Note: if the following chamber is simply laid onto the preceding chamber the joint will not be fully engaged.

Turns

- The Arc 36 and Arc 24 chambers are designed with an articulating joint that allows for a turn of up to 20°, with maximum of 10° in either direction.

Turns (continued)

(Note: The Arc 24 is designed with lockout tabs)

- If a turn application is desired with the Arc 24 chamber, the lockout tab should be removed before installing the incoming chamber. The lockout tab is located at the base flange of the previously–installed chamber (on its “Post” end).

Installation of End Caps & Pipe Connections

- Prior to installing end caps, remove the appropriate knockout for pipe connections. Snap an end cap on each end of the drain lines with the product or company logo facing out (knockouts can be removed with a knife or a 4” hole saw).

- Upper end cap 4” knockouts — shall always be used as inlet for each line. A four-inch hole saw may be used.
- Lower end cap 4” knockouts—may be used to create turns in the drain lines greater than the ten degrees provided by the chamber swivel feature.

Splash Plates

- Splash plates are optional on each inlet end cap for gravity delivery of effluent.
- Company-provided splash plates are installed by simply aligning the holes on the splash plate with the corresponding dimples on the end cap and snapping into place.
- Splash plates are sold separately.
- A custom “receiving area” is required on all BioDiffuser/ARC chamber systems where effluent is provided to the system under pressure (see pages 20 & 21).

14
ARC/BIODIFFUSER LEACHING SYSTEMS: INSTALLATION PROCEDURES

Filter Fabric
The use of filter fabric is recommended, and may be required, in certain soil conditions. If used, drape the fabric to completely cover the louvered sidewalls of the chambers to prevent soil intrusion, while allowing water and air to pass through.

The following single or combination of conditions warrant the use of filter fabric:
• The back fill material is fine or very fine uniform sand.
• The drain field will be left uncovered.
• The drain field will not be protected from surface runoff drainage, (i.e. downspouts, barrel-tile roofs, paved areas, and neighboring property).
• The bottom of the drain field will be less than 12” from seasonal high water level.
• Filter fabric shall meet the following specifications and can be purchased from your ADS/Hancor BioDiffuser distributors:
  • Fabric: Spun bonded, made up of nylon fibers, hydrophilic in nature.
  • Weight: 0.35 – 1 oz/yd2
  • AOS: 20-30 U.S. Sieve (ASTN D4571)

Ventilation
Drain field ventilation is recommended, but not required, to allow oxygen to access the drain field especially when cover soil quality is questionable.
• Knockouts are provided on the 11” Standard, Arc 36, and Bio 3 chambers. The dome/post feature of the Arc 24 chamber also acts as a knock-out for observation/vent ports. Here a PVC pipe may be introduced into the chamber and vented to atmosphere.
• Make certain that vents are assembled in such a fashion as to prevent rainwater from entering and effluent from exiting the chamber line.
• Several outlet products are available for this purpose.

Backfilling
• After chamber assembly is completed, fill that area adjacent to the louvered sidewall with loose soil that is free from clods or rocks.
• Modestly compact the sidewall area backfill material by simply walking down the sides of the chambers. Sidewall compaction is important to begin the stabilization process of the soil, to support the chamber sidewalls, and help prevent fine sand migration into the chamber louvers. This procedure may be accomplished any time during the installation or covering process.

• All ARC chambers are H-10 load rated. Where vehicular loading is anticipated during installation of the system or construction of the facility, H-10 loading (16,000 lbs/axle) is achieved by backfilling with a minimum of 12” of properly compacted cover.
• Do not drive heavy equipment over a system comprised of non-compacted cover material without first bridging the excavation. Use lightweight or tracked equipment to push the soil onto the system to the proper height set forth by local and state codes.

Final Grade
• Make certain that storm water runoff is diverted away from the drain field. System final grade should be crested or sloped, never left flat or concave. Channel water away from the drain field.
• Final grading subcontractors and landscapers should be alerted and instructed to proper covering procedures, cover materials, and finish contours and elevations.
• Final grade material should be shaped and smoothed with minimum equipment traffic to help maintain an aerobic state in the drain field.
• Stabilize the drain field area with grass-type vegetation prior to heavy rains if possible.
**Typical Installation:**

1. **Trench Configuration**
   - The typical installation is utilized on level sites.

**Typical Trench: Cross Section**

**Typical Trench: Plan View**

- Schedule 40
- Septic Tank D-Box
- Inspection Ports
- Minimum Center-to-Center Spacing As Per Approval - 9' for 34" Wide Chambers and 7' for 22" Wide Chambers
- End Caps Must be Installed on Both Ends of Every Chamber Row
Typical Installation:
II. Bed Configuration

Typical Bed: Cross Section

Typical Bed: Plan View

End Caps Must be Installed on Both Ends of Every Chamber Row

1-3" Separation Between Individual Chamber Rows

Septic Tank D-Box

Inspection Ports

Schedule 40

Topsoil
Backfill

6" Min

34"
36" Typ

17
Additional Configurations:

I. Serial Configuration – Direct (End Cap-to-End Cap)

• This configuration is installed on sloping or level sites.

Serial to Direct: Cross Section (level)

Serial to Direct: Cross Section (slope)

Serial to Direct: Plan View
Additional Configurations:

II. Serial Configuration
– Side Port Coupler to Side Port Coupler (SPC to SPC)

From Septic System

ARC Side Port Chamber

End Cap

Crossover Pipe Shall Be Installed on Stable, Undisturbed Bedding

Schedule 40

Minimum Center-to-Center Spacing As Per Approval - 9' for 34" Wide Chambers and 7' for 22" Wide Chambers

Additional Configurations:

III. Fill System

Fill System: Section View

1:3 Gradient (Typ.)

Topsoil

34" Typ

3' to 9'

Center-to-Center

Depth Per Design Fill Per Spec

Break-Up and Mix Native Soil Per Design

Notes:
• Fill systems typically found in the coastal plain region of NC in a Group I soil.
• The rise:run ratio depicted in the configuration above is 1:3. For Group II, III, and IV the ratio is 1:4.
• Remove layers of vegetation (i.e. grass) and properly incorporate/mix (homogeneous) suitable fill material with the natural soil surface at the interface.
• At least 6-inches of Group II and/or Group III soil cover is required to promote vegetative growth and reduce erosion.
Additional Configurations:

IV. Pump Systems: Pressure Distribution

- High flow dissipation is required on all of these systems
- Approved pressure distribution device methods include pressure manifold, flow splitter and distribution box.

Pressure Distribution: Receiving Area

- This specification is required for all dosed systems.

PRESSURE DISTRIBUTION: INSTALLATION INSTRUCTIONS FOR RECEIVING AREA, OBSERVATION PORT, AND VENT PIPE

Background

Systems utilizing pressure dosing must be inspected prior to final backfill, and vented. Because effluent entering a chamber line under pressure may disturb the biomat on the trench bottom infiltrative surface, a “receiving area” must be created to dissipate this flow. When installing a pressure dosed system, the following steps must be performed.

Side Port Coupler (SPC)

- In order to provide for an observation port directly above the receiving area, a SPC, with an end cap, must be used on the inlet end of each chamber line.

Receiving Area

- The Contractor shall prepare a “receiving area” by centering a 16” x 16” concrete paver (or an approved equivalent) over a 20” x 20” x 2” deep gravel (washed stone) bed. This “receiving area” shall begin where the end cap is placed against the SPC.

Inlet Pipe

- A 1-1/2” to 3” PVC pipe shall be used as an inlet pipe. The contractor must use an appropriate-sized hole saw to create an entrance hole for the 1-1/2” to 3” PVC inlet pipe in the end cap.
- The inlet pipe shall end with an elbow (90 degree fitting), the center of which is to be located inside the chamber void space directly over the center of the receiving area, pointing downward (see drawing on page 17).
- The inlet pipe shall be firmly embedded on the outside of the chamber to prevent movement or settling during system backfill.

Inspection Pipe

- 4” Sch. 40 or 4” PVC pipe shall be used for the observation port.
- Selected pipe should be installed using appropriate coupler. Coupler should seat on SPC at knockout provided in center corrugation.
- Pipe going up to grade should be cut to appropriate length. Pipe going into chamber void should be cut very short, to allow for adequate length so as to secure installation through knockout, but not so long as to interfere with the system inlet pipe.

Vent Pipe

- Install 3” or 4” PVC outlet pipe into each end cap (note: a hole saw is required for 3” pipe).
- Interconnect (manifold) all outlet pipes using appropriate PVC fittings.
- Prepare a vent pipe by drilling a minimum of 12” – 5/8” diameter holes into the upper 8” of the pipe, to provide for adequate air movement.
- Install vent pipe. The vent pipe shall be 3” or 4” PVC, and shall be installed into the roof knockout of the last chamber in the upper chamber line (note: a hole saw is required for 3” pipe). The pipe shall be secured at the chamber using a coupler, and extend into the chamber void only so far as necessary to stay in place.
- Complete the vent pipe with a Sch. 40 cap extending 12” above the ground surface.

Note:

This method of providing ventilation is only one way in which the chamber line may be vented. Other means of providing effective ventilation may be allowed by the state and/or local authority, including use of the observation ports.
Additional Configurations:

**Pressure Dispersal:**
**Detail with Arc Side Port Coupler**

- **Side Port Coupler (SPC)**
- **Arc 36 End Plate**
- **20" Gravel Pad**
- **Bedding and Backfill as Specified by Project Plans and Local Installation Regulations**

**Pressure Dispersal:**
**Observation Port/Vent Pipe**

- **Install Inspection/Vent Pipe Using Sch. 40 Pipe and Coupler**

**V. Pressure Dispersal**

Approved pressure dispersal devices and methods include LPP and Drip.

**Pressure Dispersal:**
**Pipe Support Installation Cross Section**

- **Chamber**
- **4" Perforated Pipe with All Weather Pipe Straps at Every Chamber Connection**
- **Pressure Pipe with Holes at 12 O'clock, Plus Two Weep Holes Per Line, One at Each End, at 6 O'clock or Drip Tubing**
### SYSTEM SIZING CHARTS

#### Arc 36 Systems: 4.61 FT²/LF - 35% I/A Reduction

<table>
<thead>
<tr>
<th>Textural Group</th>
<th>Natural Soil LTAR (gpd/sf)</th>
<th>2 BR Trench Length (ft)</th>
<th>3 BR Trench Length (ft)</th>
<th>4 BR Trench Length (ft)</th>
<th>2 BR Chambers Required (ft)</th>
<th>3 BR Chambers Required (ft)</th>
<th>4 BR Chambers Required (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Sands</td>
<td>1.0</td>
<td>80</td>
<td>120</td>
<td>160</td>
<td>52</td>
<td>11</td>
<td>78</td>
</tr>
<tr>
<td>II Coarse Loams</td>
<td>0.9</td>
<td>89</td>
<td>133</td>
<td>178</td>
<td>56</td>
<td>12</td>
<td>87</td>
</tr>
<tr>
<td>III Fine Loams</td>
<td>0.7</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>65</td>
<td>13</td>
<td>98</td>
</tr>
<tr>
<td>IV Clays</td>
<td>0.6</td>
<td>133</td>
<td>200</td>
<td>267</td>
<td>87</td>
<td>18</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>160</td>
<td>240</td>
<td>320</td>
<td>104</td>
<td>21</td>
<td>156</td>
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<td>0.4</td>
<td>200</td>
<td>300</td>
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<td>195</td>
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<td></td>
<td>0.3</td>
<td>267</td>
<td>400</td>
<td>533</td>
<td>174</td>
<td>35</td>
<td>260</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>260</td>
<td>52</td>
<td>390</td>
</tr>
<tr>
<td></td>
<td>0.1</td>
<td>800</td>
<td>1,200</td>
<td>1,600</td>
<td>521</td>
<td>105</td>
<td>781</td>
</tr>
</tbody>
</table>

#### Arc 36 Systems: 4.0 FT²/LF - 25% Approved System Status Reduction

<table>
<thead>
<tr>
<th>Textural Group</th>
<th>Natural Soil LTAR (gpd/sf)</th>
<th>2 BR Trench Length (ft)</th>
<th>3 BR Trench Length (ft)</th>
<th>4 BR Trench Length (ft)</th>
<th>2 BR Chambers Required (ft)</th>
<th>3 BR Chambers Required (ft)</th>
<th>4 BR Chambers Required (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Sands</td>
<td>1.0</td>
<td>80</td>
<td>120</td>
<td>160</td>
<td>60</td>
<td>12</td>
<td>90</td>
</tr>
<tr>
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#### 11" Standard Systems: 4.61 FT²/LF - 35% I/A Reduction

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### SYSTEM SIZING CHARTS: (continued)

#### 11" Standard Systems: 4.0 FT²/LF - 25% Approved System Status Reduction

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#### Arc 24 Systems: 3.0 FT²/LF

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#### Bio 3 Systems: 3.0 FT²/LF

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Innovation in product, process and technology.

That's ADS and Hancor.

Beginning with single wall corrugated polyethylene pipe, ADS and Hancor have continually introduced drainage products that have set the industry standard – bringing to market a remarkable alternative to concrete and steel pipe. Our commitment to being the best means that we continue to refine the structural design of our pipe and redefine the limits of its application in the structural design community.