



Charlie Crist  
Governor

Ana M. Viamonte Ros, M.D., M.P.H.  
State Surgeon General

---

**INTEROFFICE MEMORANDUM**

**INFORMATION  
HSES 09-005**

**DATE:** March 27, 2009

**TO:** County Health Department Directors/Administrators  
ATTN: Environmental Health and Engineering Directors

**THROUGH:** Lisa Conti, D.V.M., M.P.H., Dipl. ACVPM, CEHP  
Director, Division of Environmental Health

**FROM:** Gerald Briggs, Chief,  
Bureau of Onsite Sewage Programs

**SUBJECT:** Approval to Cut Advanced Drainage Systems, Inc. ARC-24 Plastic Leaching Chamber

**INFORMATION ONLY**

---

This memo is to inform you of the approval to cut the Advanced Drainage Systems, Inc., ARC-24 Plastic Leaching Chambers. Attached is an addendum to the approved Operations and Installation Manual with the instructions on how the chambers are to be cut and rejoined. They are allowed to be cut in one foot increments only. Each lineal foot is equivalent to 3 square feet.

The alternative drainfield sizing table will be updated. It is available on the Department of Health Internet site. You can access the sizing table at:

<http://www.doh.state.fl.us/environment/ostds/pdfiles/forms/Alternative.pdf>

Please provide a copy of this memorandum to all licensed septic tank contractors and plumbers performing septic tank contracting services in your county.

If you have any questions about this memo please contact Kim Duffek at 407-317-7325.

Attachment



**Division of Environmental Health, Bureau of Onsite Sewage Programs  
4052 Bald Cypress Way, Bin #A08, Tallahassee, Florida 32399-1713**

## Cutting Instructions For The ARC 24 Chamber

### Background:

Drainfields in Florida, whether constructed with gravel and pipe, chambers, Multi-Pipe or EZ Flow products, are oftentimes restricted by site conditions. All of the aforementioned products have met the needs of length issues with the ability to customize the product length to fit the conditions of the project. ADS is responding to those needs by formulating instructions for cutting and rejoining chambers to create a more flexible product.

The ARC 24 chamber, introduced to Florida in 2006, is designed with a series of true radius corrugations, similar to those of our corrugated pipe. These radius corrugations provide good positions for cutting and re-joining the cut ends to adjust lengths of drain lines.

### General Requirements:

Whenever the chambers are cut and assembled, the following criteria must be met:

- The overall drainfield construction must meet the specifications of chapter 64E-6 FAC.
- The total square footage must meet or exceed the design specifications permitted by the FDOH.
- Cutting and assembly must meet the instructions of the manufacturer.
- Full-length chambers are preferred whenever possible.

### General Information:

Each ARC chamber ends are designated "Dome" for the beginning end or "Post" for the final end, for installation purposes. Overall length of each chamber is 67" and the repeat length is 60". Each 5-foot chamber is equivalent to 15 square feet. Each lineal foot is equivalent to 3 square feet, excluding the "Post" aspect of the final unit. Cuts are allowed in one-foot increments only. (See note at end of instructions)

### Example for Cutting Chambers:

A particular site requires the drain lines to be 23 lineal feet, or 69 square feet (23 x 3sf/ft = 69sf). For this example, we will use four full chambers and three feet of another chamber.

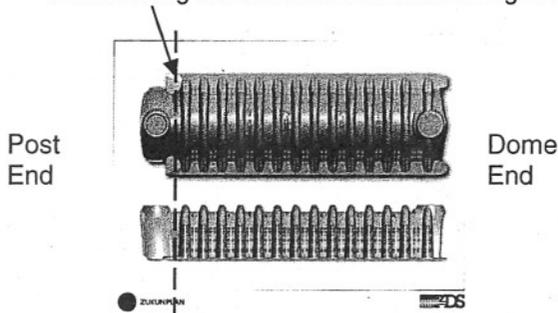
### Calculations for this Example:

- 23 feet divided by 5 feet per chamber = 4.6 chambers, or 4 full plus 3 feet of a cut chamber. (60" x .6 = 36")
- 69 square feet divided by 15 square feet/chamber = 4.6 chambers (3 feet of chamber equals 9 square feet)

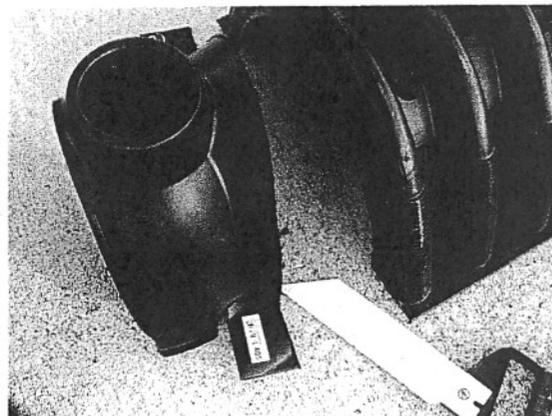
### Cutting and Assembly instructions:

The Post aspect must be removed from the previous (next-to-last) chamber by cutting a straight line along the bottom of the last corrugation closest to the Post. **See figures 1 & 2**

Remove Post aspect of previous chamber  
Saw cutting line at bottom of last corrugation



**Figure 1 - Previous Chamber Cut Line**



**Figure 2 - Post removed from previous chamber**

## Cutting Instructions For The ARC 24 Chamber

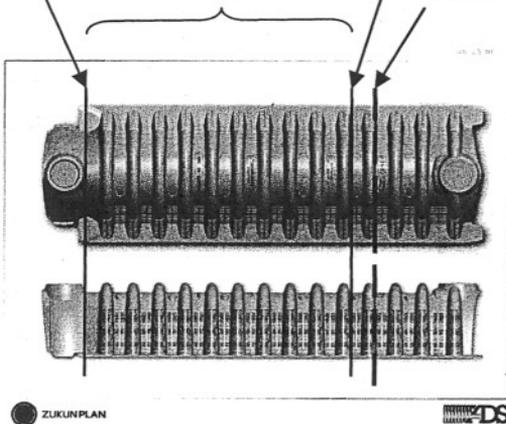
### Measuring the incoming chamber for the cut: (from example)

- From the calculations of the example, 5 chambers equal 20 feet, plus the additional net three feet of a cut chamber equals 23 feet. (The overall length of this drainline will be 23.6 feet, including the post of the last chamber)
- Measure from the bottom of the post to 36", then add one corrugation for overlapping and mark the measurement. **See Figure 3**
- Saw cut the incoming chamber at the mark. **Figures 4 & 5**

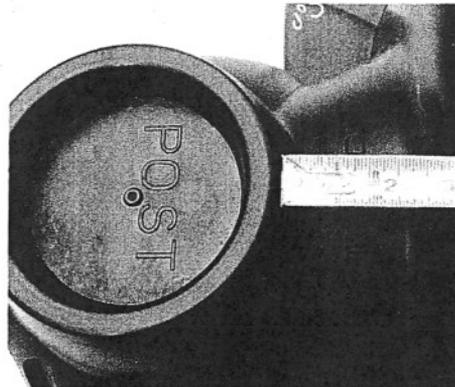
Measurement lines – from last corrugation nearest the Post, to additional length required from calculation.  
Example Drainline requires 3 additional feet. Measure three feet and add one corrugation for overlap.

Begin measurement  
-from bottom of post aspect  
36"

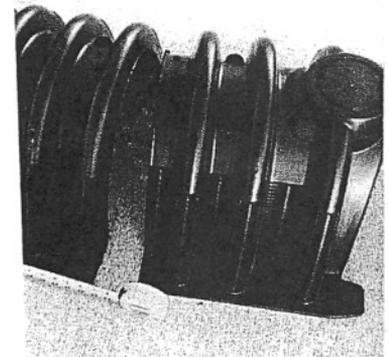
Measure 36 inches  
-add one corrugation for overlap  
Cut line measurement is 40" from post



**Figure 3 – Measure 36"  
Cut 40" from Post**



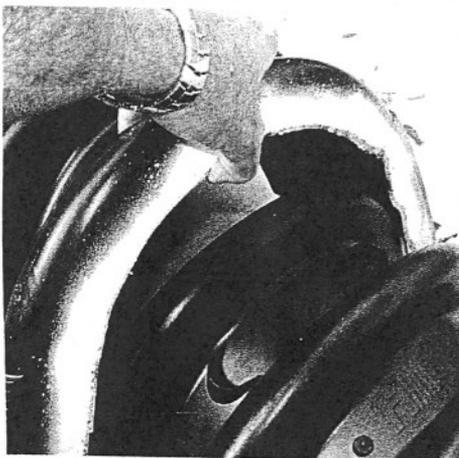
**Figure 4 – Measure from Post**



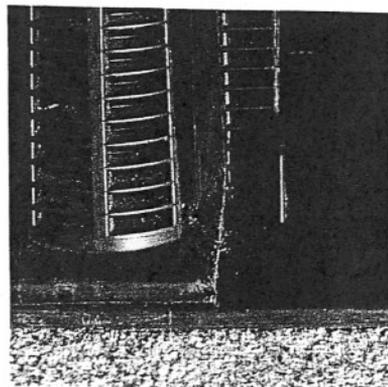
**Figure 5 – Saw cut  
at base of corrugation**

### Assembly instructions:

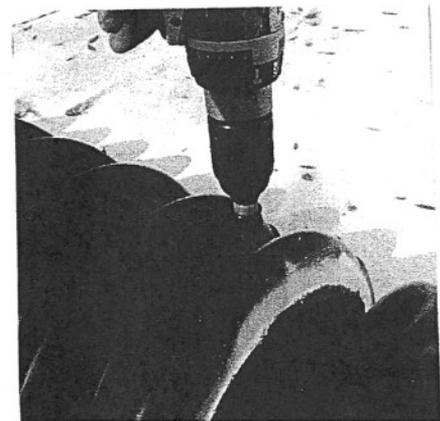
- Place the incoming measured and cut chamber over the previous chamber overlapping one corrugation. **Fig. 6**
- There will be a slight elevation difference at the joining area due to the overlap, approximately 3/16". **Fig. 7**
- Drive a screw through the overlap corrugations to hold the chambers in position through inspection and backfilling. **Fig.8**



**Figure 6 – Rejoin chambers**



**Figure 7 – Overlap**

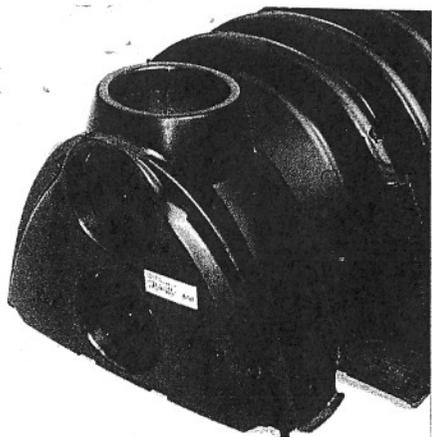


**Figure 8 – Screw joint**

## Cutting Instructions For The ARC 24 Chamber

### Assembly Instructions: (Continued)

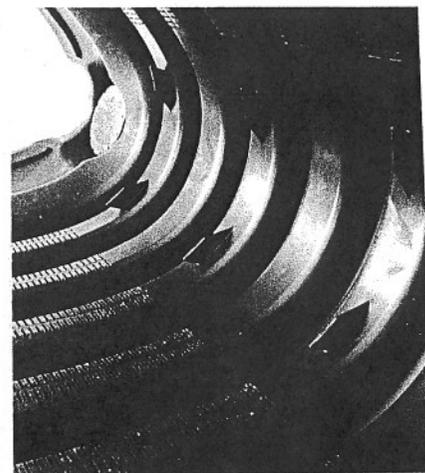
- The post of the incoming chamber will accept an end cap as usual. **Fig 9**
  - The finished drain line will be 23.6 feet total or 69 square feet of equivalent drainfield. **Fig. 10**
- NOTE:** Cuts for **one-foot** and **four-foot** sections only, will require the removal of two stacking pins from the underside of the chamber at the overlap. **Fig 11**
- Using a razor knife, carefully deep-score the base of both sides of the two selected stacking pins to be removed from the underside of the incoming chamber. **Fig 12**
  - Strike the pins with a hammer. **Fig 13**
  - Make sure all of the pin material is removed. **Fig 14**
  - This step is *only* required for one and four-foot cuts (3 sq ft, and 12 sq ft sections)



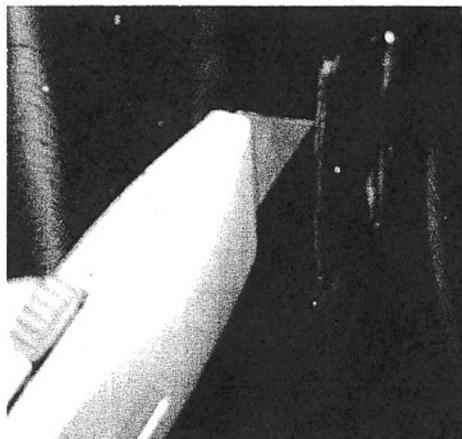
**Figure 9 – Install end cap  
As usual**



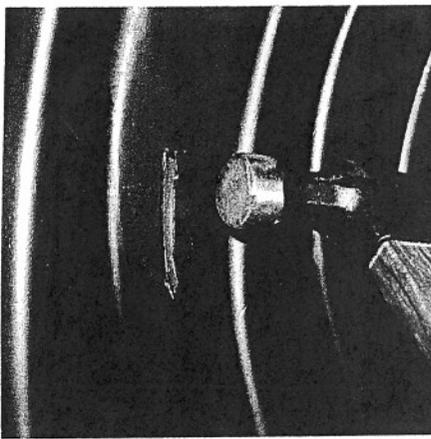
**Figure 10 – Finished line  
27.6 feet**



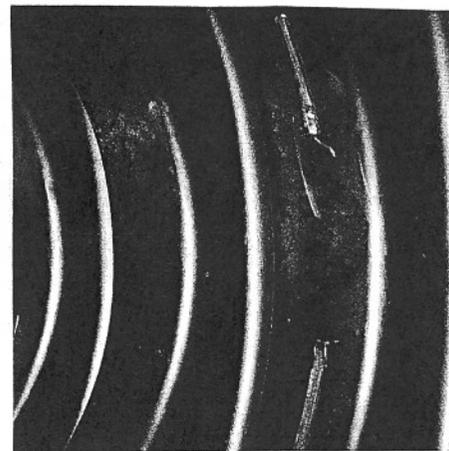
**Figure 11 – Stacking pins  
Underside**



**Figure 12 – Score pins on both sides  
with razor knife**



**Figure 13 – Strike scored fins  
with hammer**



**Figure 14 – Clean break**



## SAVE TIME AND LABOR WITH THE ARC 24

Leaching chambers are rapidly becoming the product of choice for leachfield applications over conventional pipe and gravel systems. Their lightweight construction offers lower installed costs and less intrusive installations.

### ENGINEERED FOR OPTIMAL PERFORMANCE

The Arc 24 septic leaching chamber is a sturdy, lightweight plastic unit that combines maximized infiltrative surface area and storage capacity with an improved structural design to handle most any conventional leachfield system challenge without sacrificing performance.

This unique combination allows for increased effluent dispersal performance and improved structural integrity as well as ease of installation and simplified contouring capabilities.

### FEATURES & BENEFITS:

- Injection-molded from High Density Polyethylene (HDPE) for lightweight and sturdy design
- 20-degree integral articulating joint that is ideal for either straight or contoured septic leachfield applications
- True corrugated chamber design eliminates flat surfaces and provides increased load bearing capability in the trench
- Designed to accommodate both gravity-fed and pressure-dosed systems
- A universal inlet/outlet end cap
- Inspection vent ports on every unit with easy-to-remove knockouts for maximum job site flexibility
- Convenient five-foot lengths are easy to handle
- Quickly installed by one person into two-foot wide trench or bed applications
- Increased plumbing option with Side Port Coupler component which snaps in place to allow side entry at any joint throughout the trench line.
- Diamond plate texture increases slip resistance and enhances ease of installation

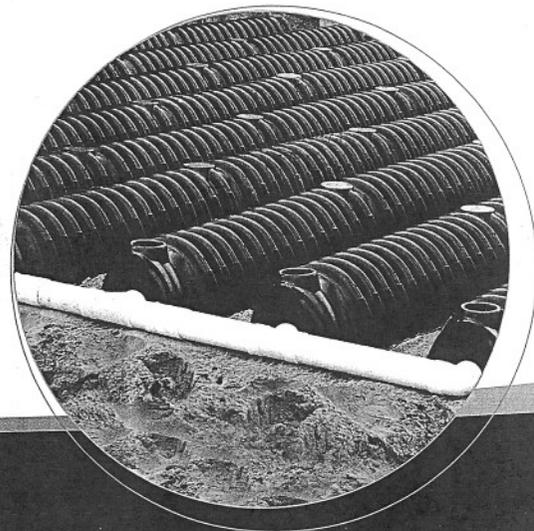
**ADS Service:** ADS representatives are committed to providing you with the answers to all your questions, including specifications, and installation and more.



Side Port Coupler



Diamond Plate Texture



## ADS ARC™ 24 SEPTIC LEACHING CHAMBER SPECIFICATIONS

### SCOPE

This specification describes the Arc chamber units for use in onsite wastewater disposal applications.

### CHAMBER REQUIREMENTS

Arc chambers are manufactured from high-density polyethylene with an open bottom, solid top and louvered sidewalls. Sidewall louvers shall be designed to minimize soil intrusion.

Chamber shall meet the load rating of H-10 (16,000 lb per axle) with a minimum of 12 inches of cover when tested in accordance with IAPMO PS 63 and installed in accordance with manufacturers installation procedures.

### CHAMBER CONNECTION

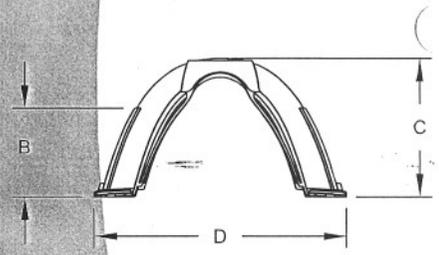
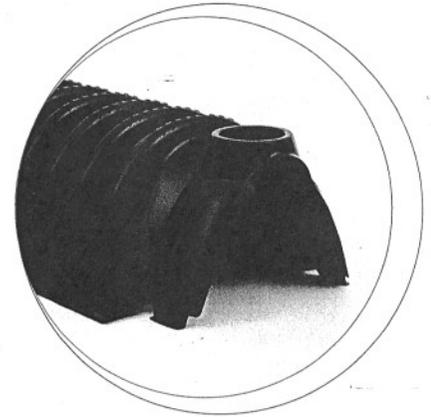
Each chamber shall interlock with an integral articulating joint. Articulating joints shall have a free range of horizontal rotation of 20 degrees, with a maximum of 10 degrees in either direction. Articulating joint shall be constructed by placing the dome with engaging knuckle of the incoming chamber over the post end of the previously-installed chamber, with final engagement occurring when the lower base flanges of the incoming chamber under-lap the raised base flanges of the previously-installed chamber.

### MATERIAL PROPERTIES

Each chamber shall be manufactured from high-density polyethylene as defined and described in IAPMO PS 63.

### INSTALLATION

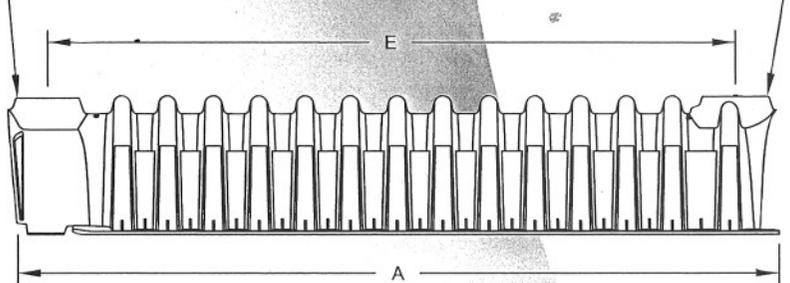
Installation shall be in accordance with ADS installation procedures and those issued by the local health department regulations.



ARC 24 NOMINAL DIMENSIONS	
Length (A)	67"
Repeat Length (E)	60"
Sidewall Height (B)	7.5"
Overall Height (C)	12"
Overall Width (D)	22.5"
Weight	13 lbs.
Total Open Bottom Area	7.96 sq.ft.
Capacity	5.02 cu ft (37.5 gal)
Pallet Quantity	120 chambers
Van (Box Trailer) Quantity	17 Pallets
Flatbed Quantity	15 Pallets

POST END WITH RECEIVING AREA

DOMED END



For more information on ADS Arc 24 and other ADS products, please contact our Customer Service Representatives at **1-800-821-6710**

ADS "Terms and Conditions of Sale" are available on the ADS website, [www.ads-pipe.com](http://www.ads-pipe.com)  
 The ADS logo, the Green Stripe, and Arc™ are registered trademarks of Advanced Drainage Systems, Inc. © 2008 Advanced Drainage Systems, Inc.  
 BRO 10596 02/08