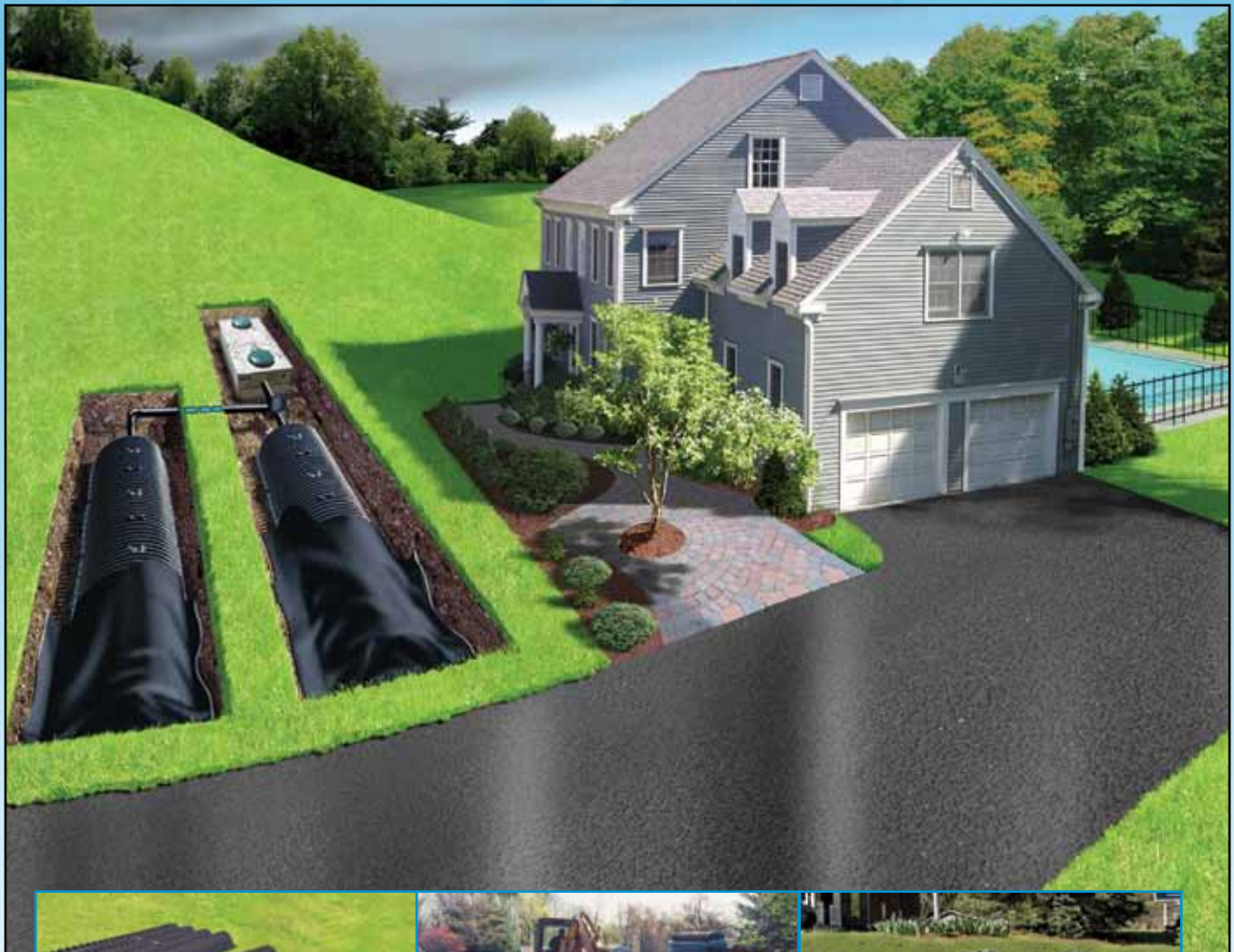


Contactor® & Recharger® Septic Chambers



Septic Installation Guide Book



CULTEC Septic Chambers

Published by
CULTEC, Inc.
P.O. Box 280
878 Federal Road
Brookfield, Connecticut 06804 USA
www.cultec.com

Copyright Notice

© 2014 CULTEC, Inc. All rights reserved. Printed in the USA.
This document and any accompanying CULTEC products are copyrighted by CULTEC, Inc. Any reproduction and/or distribution without prior written consent from CULTEC, Inc. is strictly prohibited.

Disclaimers:

The drawings, photographs and illustrations shown in this document are for illustrative purposes only and are not necessarily to scale. Actual designs may vary.

CULTEC reserves the right to make design and/or specification changes at any time without notice at CULTEC's sole discretion.

CULTEC is not responsible for typographical errors.

Protected by one or more of the following patents:

U.S. Patents 6,129,482; 6,322,288; 6,854,925; 7,226,241; 7,806,627; 8,366,346; 8,425,148; and others; U.S. Designs D613819; D638,095; D668,318 and others; Canadian Patent 2,591,255 and others; Community Designs 1092191; 1745209; and others.

CULTEC, the CULTEC logo, RECHARGER, CONTACTOR, HVLV, PAC, STORMFILTER, STORMGENIE and The Chamber with The Stripe are registered trademarks of CULTEC, Inc.

Chamber of Choice, 902, HD, 100, 125, 150, 150XL, 180, 280, 330, 330XL, V8, 900, Field Drain Panel, C-1, C-2, C-3, C-4, EZ-24, Landscape Series are trademarks of CULTEC, Inc. All rights reserved.

Contact Information:

For general information on our other products and services, please contact our offices within the United States at (800)428-5832, (203)775-4416 ext. 2002, or email us at custservice@cultec.com.

For technical support, please call (203)775-4416 ext. 2003 or email tech@cultec.com.

Doc ID: CULG066 05-14

May 2014

You are using version CULG066 05-14 of our CULTEC Septic Installation Guide Book.

CULTEC Chambers: The Standard in Leachfields

The CULTEC Contactor® and Recharger® chambers are the alternative to conventional pipe and stone or concrete leachfield systems. They may be installed in trench, trench with pipe distribution system (PDS), bed or field or gallery design per applicable state code. Contact area is maximized by the fully open bottoms, perforated sidewalls, and use of CULTEC No. 410™ Filter Fabric. The CULTEC No. 410™ Filter Fabric wicks moisture, wetting the entire surface area of the chambers and prevents soil intrusion. Gravity feed or pressure distribution is made easy by the chamber's built-in features.



Trench installation demonstrating minimal disturbance of land.

A typical CULTEC gravelless septic system consists of:

- Septic tank
- Distribution box(es)
- Pipe
- CULTEC Contactor® or Recharger® chambers
- CULTEC No. 410™ Filter Fabric, or approved equal

System benefits:

- Reduced soil absorption system area, where allowed
- Greater contact with primary leaching area promotes maximum infiltration capabilities of soil
- Lightweight
- Gravelless installation allows for less heavy equipment time
- Overlapping rib connection is fast and easy to install
- Long structural life expectancy

Additional advantage provided by CULTEC No. 410™ Filter Fabric:

- A high degree of capillary distribution of effluent and ability to discharge into the surrounding soil
- When effluent impinges upon the fabric, it is quickly absorbed and interfaced with a greater total soil area than a trickle down gravity distribution system

CULTEC Septic Chambers

CULTEC Chamber Product Lines

The CULTEC Contactor® Series

Available in Standard and Heavy Duty versions.



Field Drain C-4

EZ-24

100

100HD

The CULTEC Recharger® Series

Only available in Heavy Duty version.



150XLHD

180HD

280HD

330XLHD



900HD

Note: Contact CULTEC or your local health department to determine which chambers are approved for septic use in your area.

Straight Line Deflection of CULTEC Chambers

The patented overlapping rib connection used by CULTEC's Contactor®, Recharger® and Field Drain™ chambers permit a curved line of installation. This is a beneficial quality when following land contours or when a sweep around an obstruction is necessary.



Contactor® EZ-24 Special Flex Design

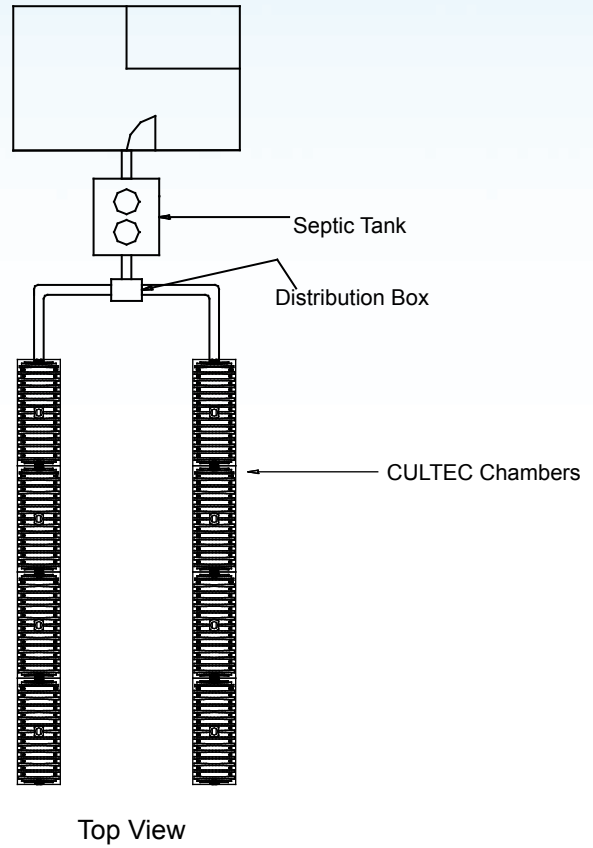
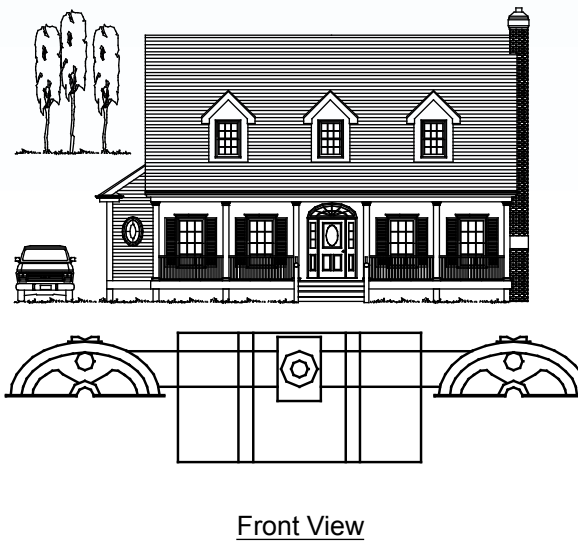
Model	Deflection (per 100')
Contactor® Field Drain™ C-4 and C-4HD	1'
Contactor® EZ-24 and EZ-24HD	25'
Contactor® 100 and 100HD	6'
Recharger® 150XLHD	5'
Recharger® 180HD	6'
Recharger® 280HD	6'
Recharger® 330XLHD	5'

CULTEC Septic Chambers

Preparation

- Following standard construction practices, prepare the trench according to state and local codes.
- Excavate to a width and length sufficient to fit the number of chambers and bed design. The bottom of the trench should be **LEVEL**.
- In fill systems (trench, bed and galley), compact the loose material to eliminate settling.
- Prior to installing the chambers, scarify the bottom and sidewalls of the soil surface.

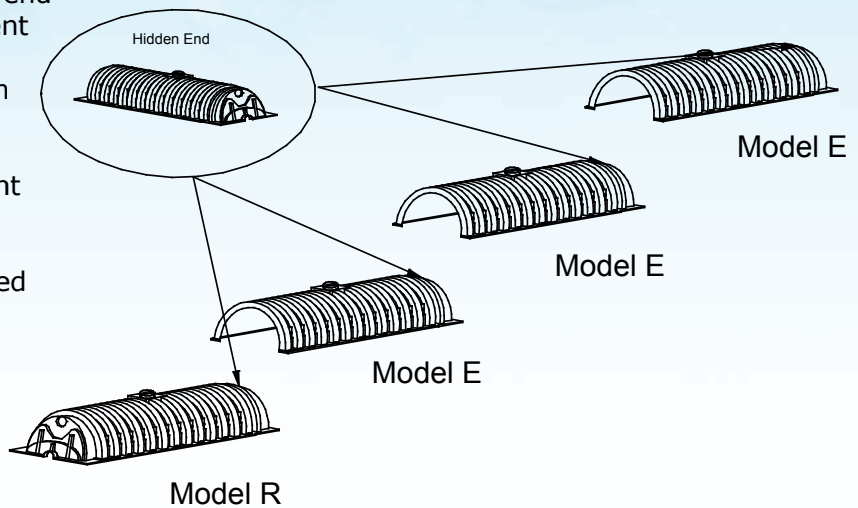
Typical CULTEC Septic System



Model	Height	Width	Min. Recommended Trench Width
Contactor® Field Drain™ C-4 and C-4HD	8.5"	48"	52"
Contactor® EZ-24 and EZ-24HD	12.5"	16"	20"
Contactor® 100 and 100HD	12.5"	36"	39"
Recharger® 150XLHD	18.0"	33"	36"
Recharger® 180HD	20.5"	36"	40"
Recharger® 280HD	26.5"	47"	52"
Recharger® 330XLHD	30.5"	52"	56"
Recharger® 900HD	48"	78"	82"

Chamber Installation in a Typical Gravity System

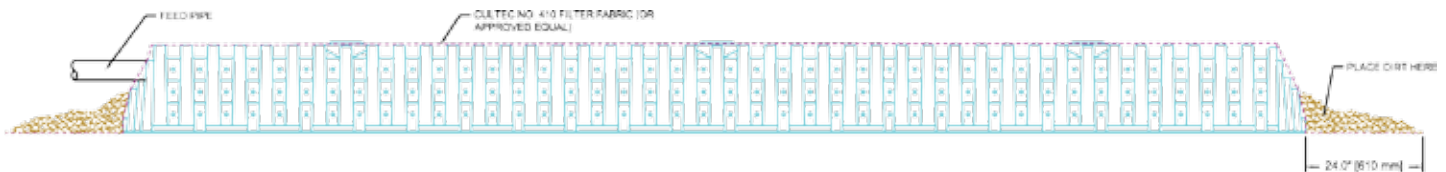
- Set the starter unit (Model R) in the trench. Position the large rib end of the chamber toward the effluent feed pipe to start the line.
- OPTIONAL (See fabric installation if not using a splash deflector): Place a splash deflector under the feed pipe discharge to prevent rutting of the base soil.
- Continue the line of chambers by joining the units using patented interlocking rib connection. Overlap the larger rib (Model E) over the smaller rib of the preceding chamber. No screws are needed. Continue to the desired length and end the line of chambers using Model E.



Installation of the Fabric Interface for a Gravelless Septic System

Note: Contact CULTEC or your local health department to determine which chambers are approved for septic use in your area.

- To determine the length of CULTEC No. 410™ filter fabric, or approved equal, used to cover an installed line of chambers, measure the distance on the top of the Contactor®, Recharger® or Field Drain™ chambers and add the required fabric length from the table on page 8.
- After the starting CULTEC chamber is put in place, lay approximately 2 feet of the CULTEC No. 410™ Filter Fabric on the ground at the beginning of the line spanning the width of the chamber.
- Throw 5-6 shovels full of approved backfill over the cloth where it meets the base of the end wall to secure it in place.
- Pull fabric up the vertical end wall, across the top of the line of chambers, and down the vertical end wall of the end of the line. Pull the fabric tight. Allow an extra foot or so to continue away from the end wall.
- Pull the free end of the fabric interface to the end of the line of the chambers making sure the center of the fabric is even with the center of the chambers, allowing the fabric to drape over evenly to the base of the units.

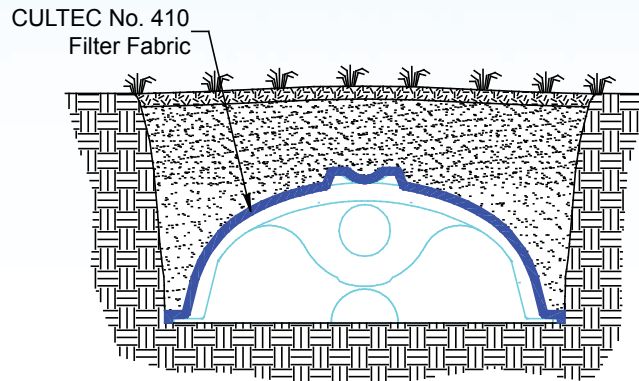


Filter Fabric Installation Profile View

CULTEC Septic Chambers

Installation of the Fabric Interface for a Gravelless Septic System *(continued)*

- Approximately 1-2 feet of extra fabric will be evident if the directions for determining fabric length are followed correctly.
- After pulling the fabric tightly over the chambers, throw 5-6 shovels full of approved backfill over the cloth where it meets the base of the final end wall.
- Inspect the fabric along the entire line of CULTEC chambers. Look for slight bends in the line where some further positioning of the fabric may be necessary. Inspect also for roots that may prevent the fabric from its proper positioning to the base of the chamber.
- Push feed pipe 6" into top inlet opening located on endwall at the beginning of the line. By cutting a small X in the fabric where the inlet is located, stretching the fabric, and pushing the pipe through, the use of pipe seals can be eliminated.



NOTE: No guarantee of performance of CULTEC Chambers will be honored if CULTEC No. 410™ Filter Fabric or approved equal is not used.

Recommended Width of Fabric

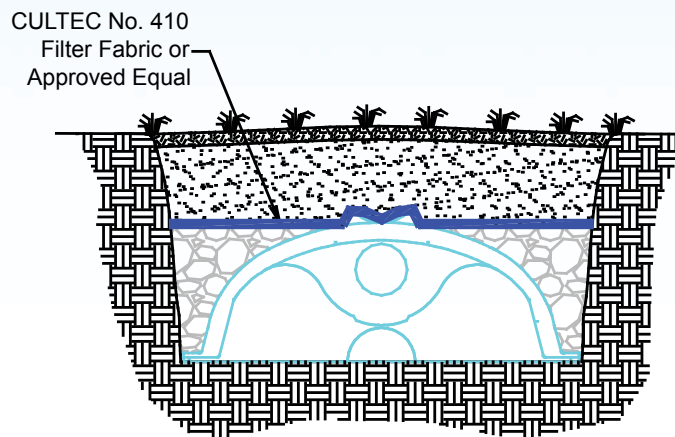
Use the recommended fabric width for each chamber. Calculate fabric required.

LF of Fabric Required: LF of system + 10% for waste = _____ LF fabric

Model	Installed Chamber Length	Chamber Length Adjustment	Fabric Roll Width	Length of Fabric to Add to Line of Chambers
Contacto [®] Field Drain™ C-4 and C-4HD	8.00'	0.50'	7.50'	5.50'
Contacto [®] EZ-24 and EZ-24HD	8.00'	0.50'	3.00'	6.00'
Contacto [®] 100	7.40'	0.60'	4.00'	6.00'
Contacto [®] 100HD	7.50'	0.50'	4.00'	6.00'
Recharger [®] 150XLHD	10.25'	0.75'	4.00'	7.50'
Recharger [®] 180HD	6.33'	1.00'	5.00'	7.50'
Recharger [®] 280HD	7.00'	1.00'	7.50'	9.00'
Recharger [®] 330XLHD	7.00'	1.50'	7.50'	9.00'
Recharger [®] 900HD	7.00'	2.25'	12.50'	12.00'

Installation of the Filter Fabric for a Septic System with Stone

- Determine the trench or bed area by multiplying the length and width according to the design. Then, add 10% for overlaps and/or waste.
- Place filter fabric (small piece) over the end section of the final chamber, covering the pre-drilled hole (if available)
- Filter fabric is placed at the interface of the top of the stone and the soil prior to final backfilling.



Recommended Width of Fabric

Calculate the area of the trench or bed.

SF of Fabric Required: (Bed L x Bed W) + 10% for waste = _____ SF of fabric

Model	Installed Chamber Length	Chamber Length Adjustment	Fabric Roll Width	Length of Fabric to Add to Line of Chambers
Contacto [®] Field Drain™ C-4 and C-4HD	8.00'	0.50'	5.00'	5.50'
Contacto [®] EZ-24 and EZ-24HD	8.00'	0.50'	3.00'	6.00'
Contacto [®] 100	7.40'	0.60'	4.00'	6.00'
Contacto [®] 100HD	7.50'	0.50'	4.00'	6.00'
Recharger [®] 150XLHD	10.25'	0.75'	4.00'	7.50'
Recharger [®] 180HD	6.33'	1.00'	4.00'	7.50'
Recharger [®] 280HD	7.00'	1.00'	7.50'	9.00'
Recharger [®] 330XLHD	7.00'	1.50'	7.50'	9.00'
Recharger [®] 900HD	7.00'	2.25'	7.50'	12.00'

CULTEC Septic Chambers

Backfilling the System

NOTE:

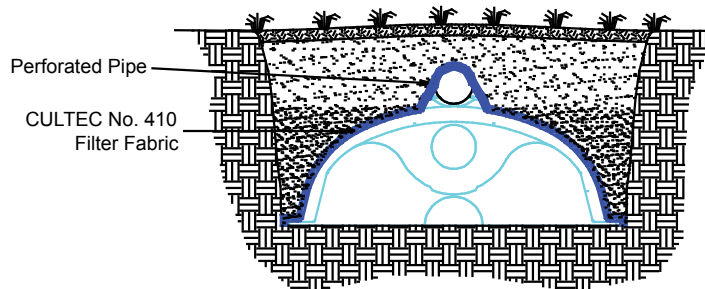
- **Material used to backfill the CULTEC Chamber System should be clean, permeable and approved.**
- **Prior to backfilling the chambers, the system must be inspected by the local health department.**

- Place backfill material on the sides of the chambers and walk along the sides of the chambers to compact backfill material.
- Place backfill material over top of the chambers to recommended height.
- When covering the system for final backfill and determination of grade, it is best to use a small track machine or backhoe bucket weighing less than 10,000 lbs. If using a loader or straight blade type machine, keep loose fill in front of the blade to a height of 2' - 2½' above the chamber top.
- **When necessary to track over the system**, traverse perpendicular to the line of chambers (only when backfilled to recommended height.)
- Proceed to raise fill to final grade.

NOTE:

For non-traffic installations: Residential installations require a minimum of 9" of cover per manufacturer's recommendation. Cover requirements may vary per state and local code.

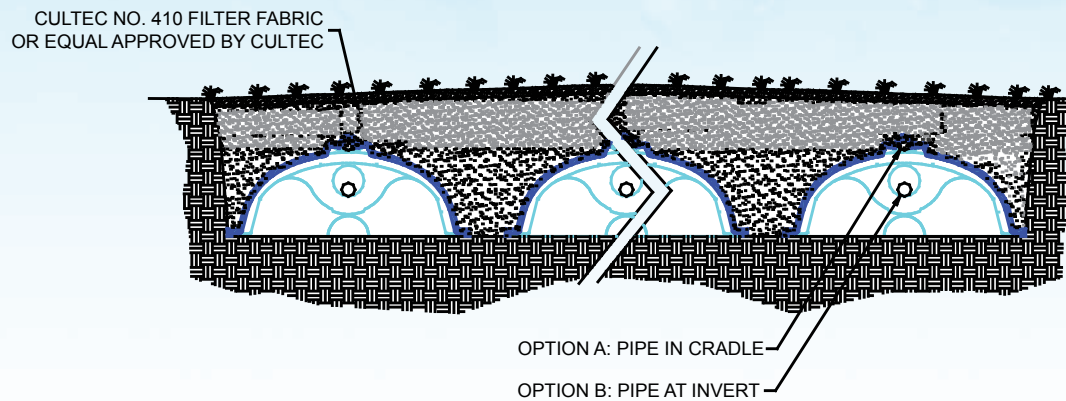
Pipe Distribution System (PDS) Installation



Typical CULTEC Gravity Distribution System with Effluent Feed Pipe in Upper Pipe Carrier

- CULTEC promotes two types of pipe distribution systems (PDS) using Contactor® and Recharger® units: Pressure Distribution and Gravity Distribution.
- Install the R chamber model towards the manifold system.
- Complete the remainder of the chamber lateral using the E model chamber joining the units using the patented interlocking rib connection.
- Place distribution pipe along top of the chambers with the perforation holes placed down.
- Place Filter Fabric on top of PDS distribution pipe.
- Complete backfill with approved soil to determined elevation.
- When covering the system for final backfill and determination of grade, it is best to use a small track machine or backhoe bucket weighing less than 10,000 lbs. If using a loader or straight blade type machine, keep loose fill in front of the blade to a height of 2' - 2½' above the chamber top.
- **When necessary to track over the system**, traverse perpendicular to the line of chambers (only when backfilled to recommended height.)
- Proceed to raise fill to final grade.

Pressure Distribution Installation



CULTEC Pressure Distribution Options

- Pressure distribution systems must meet all local and state codes.
- Manifold, lateral (pipe) size, hole-size and hole placement are determined by state and local codes.
- Place system lateral at invert height as designed by the system designer.
- Follow backfill procedures as described in prior sections.
- For self-draining, place a hole at 6 o'clock at the beginning of the lateral and at the end of the lateral. Use CULTEC No. 410 filter fabric as a splash plate.
- If pressure distribution pipe is placed inside the chamber unit, place a small splash plate below the self-draining hole, if used.



CULTEC Septic Chambers

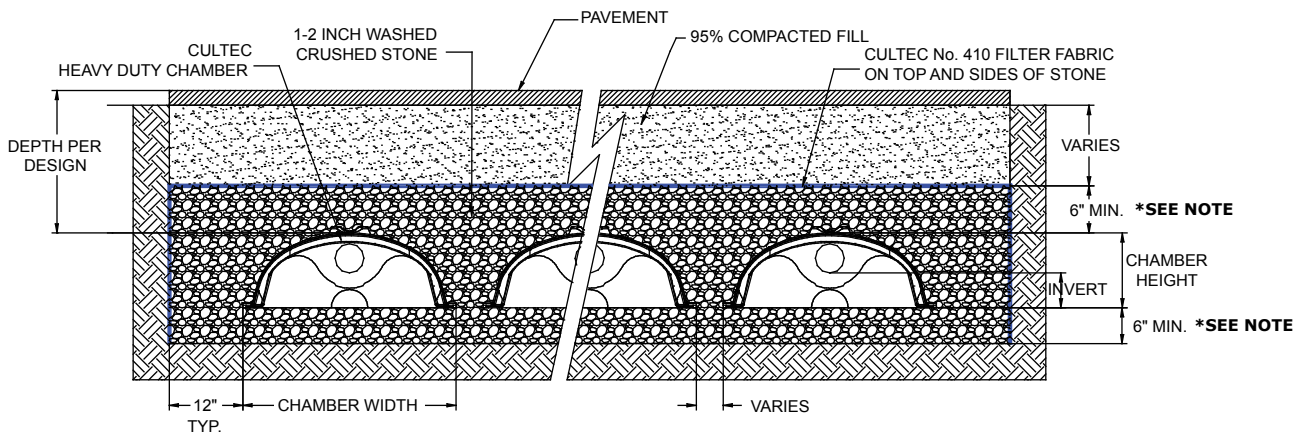
Installation Instructions for Septic System in Traffic Application

NOTE: Contact CULTEC Technical Assistance for more details on paved installations. Not all septic installation methods are approved by all areas and may vary per state and local code. Refer to the local septic code to verify this application type is approved for use in your area.

Cover Requirements for Traffic Installations under Pavement*

Model <i>Must use Heavy Duty (HD) models</i>	Minimum Allowable Cover <i>(not including pavement)</i>	Maximum Allowable Cover <i>(including pavement)</i>
Contactor® Field Drain™ C-4HD	14"	12'
Contactor® EZ-24HD	14"	12'
Contactor® 100HD	14"	12'
Recharger® 150XLHD	14"	12'
Recharger® 280HD	18"	12'
Recharger® 330XLHD	18"	12'
Recharger® 900HD	24"	6'

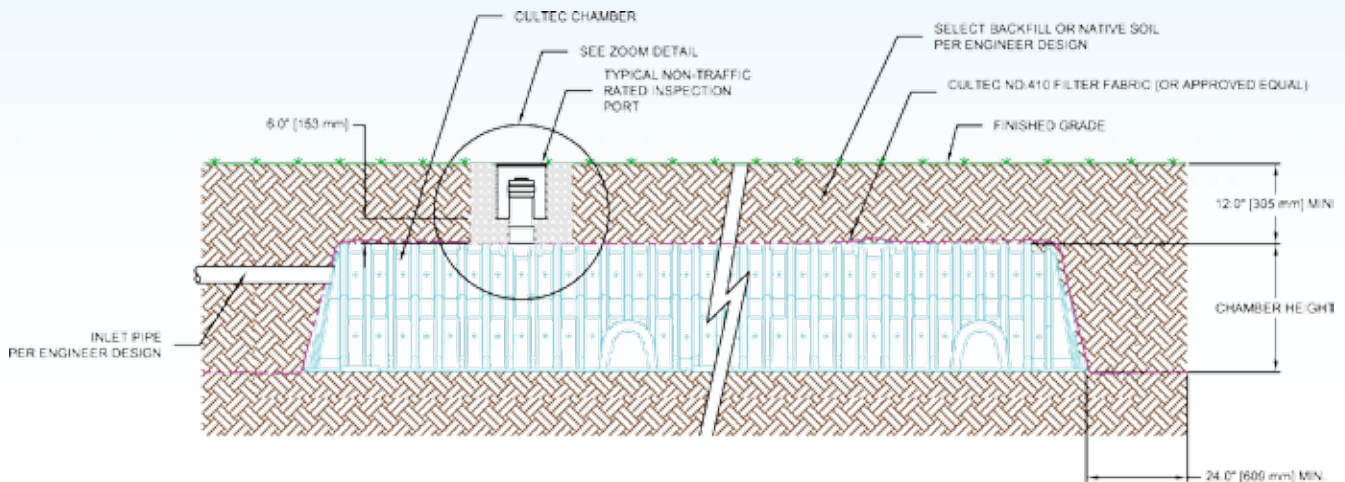
* For unpaved traffic applications, contact CULTEC, Inc.



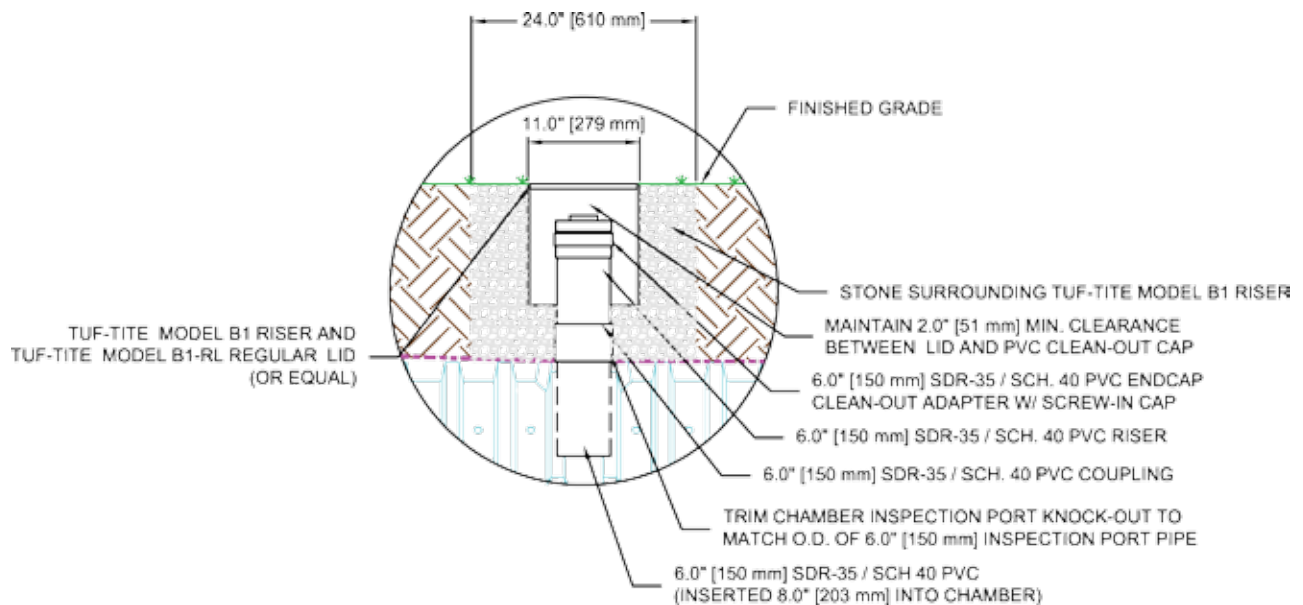
Typical Paved Traffic Septic Detail
(note: min. 9" stone base and min. 12" stone above required for Recharger 900HD)

Optional Inspection Port

- Please check your state and local code for inspection requirements.
- For applications requiring an inspection port, all CULTEC chambers supply a raised center location that can be cut with a reciprocating or properly sized hole saw.
- Locate port. Cut through the covering of CULTEC No. 410™ fabric in order to locate the inspection port in the center of any chamber.

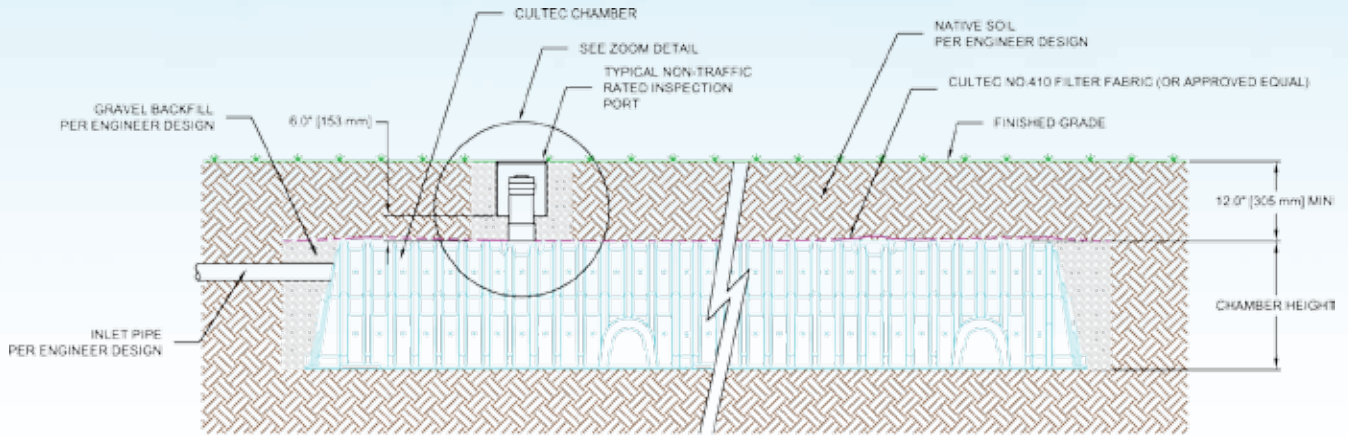


Typical Inspection Port Detail for Non-Traffic Application

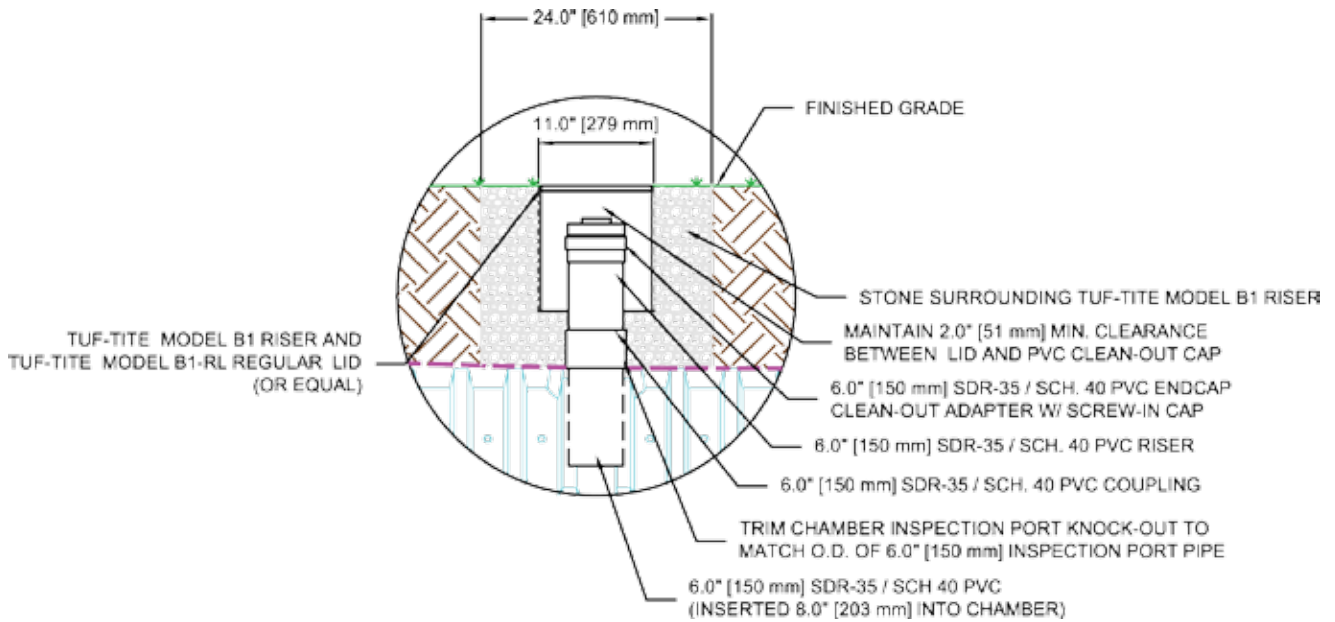


CULTEC Septic Chambers

Optional Inspection Port (continued)



Typical Inspection Port Detail for Traffic Applications



1-Yr. Limited Warranty



CULTEC, Inc. finished products, when properly installed, registered with Cultec, Inc., and operated under normal conditions of use, are covered under Cultec Inc.'s Limited Warranty to be free from defects in material and workmanship for a period of one (1) year from the date of manufacture. In order to obtain Cultec's Limited Warranty, the product warranty registration card must be completed and returned to Cultec, Inc., having been postmarked within thirty (30) days of installation. Failure to return the warranty registration card to Cultec, Inc. shall void the Limited Warranty. This Limited Warranty shall be void if the finished product is not installed within forty-five (45) days of the date of purchase from Cultec, Inc. In order to obtain performance under this Limited Warranty, Cultec, Inc. must be provided with written notice of any defect promptly (in no case later than ten (10) business days after initial discovery AND prior to the end of the Limited Warranty period), with such notice sent to 878 Federal Road, PO Box 280, Brookfield, CT 06804-0280. The original purchase receipt for the product must be included with documentation supporting any claim under the terms of this Limited Warranty. Failure to promptly submit notice of defect, a receipt and completed limited warranty certificate will void the Limited Warranty. Cultec, Inc. shall not be responsible for any freight charges incurred in connection with this Limited Warranty. A fee may be incurred when Cultec, Inc. (in its sole discretion) deems it necessary for a Cultec, Inc. representative to visit a product installation site.

This Limited Warranty extends only to Cultec, Inc. products when the products are installed in 'single level', provided that such products do not, in the collective, amount to more than 12,000 cubic feet (339.84 cubic meters) of water volume storage capacity. This Limited Warranty shall be void where products are installed in 'multi-layer' or 'multi-tier' systems, as well as wherein collective system volume exceeds 12,000 cubic feet (339.84 cubic meters) of water volume storage capacity. Notwithstanding the foregoing, Cultec, Inc., in its sole discretion, may extend certain Limited Warranty terms upon 'double-layer' or 'double-tier' product installations, as well as 'single level' product installations wherein collective system volume exceeds 12,000 cubic feet (339.84 cubic meters) of water volume storage capacity, provided that (i) the buyer has contacted Cultec, Inc. prior to installation and has advised of the proposed installation design; (ii) all product warranty registration information has been provided prior to product installation; (iii) a pre-construction/pre-installation meeting has been held with representatives of Cultec, Inc.; and (iv) Cultec, Inc. has provided written confirmation of its intent to honor any Limited Warranty terms with respect to the specific installation. Under no circumstances shall any decision by Cultec, Inc. to honor such terms be relied upon by any party in any subsequent product purchase or installation.

This Limited Warranty does not apply to installation piping and/or other parts not supplied by Cultec, Inc. Cultec, Inc.'s limited warranties also do not extend to any goods or parts which have been damaged prior to installation, subjected to misuse, damaged by lack of maintenance, improper installation, neglect, damaged by accident, or damaged by being crushed by heavy equipment weighing in excess of the rated load carrying capacity of the product. This Limited Warranty also does not apply to shipping or in-transit damage.

THIS LIMITED WARRANTY DOES NOT APPLY TO CULTEC, INC. PRODUCTS THAT HAVE NOT BEEN INSTALLED ACCORDING TO CULTEC WRITTEN INSTALLATION INSTRUCTIONS. ANY PRODUCT DAMAGE OR FAILURE RESULTING FROM IMPROPER OR NEGLIGENT INSTALLATION IS SPECIFICALLY EXCLUDED FROM THIS WARRANTY AND SHALL REMAIN THE BUYER'S RESPONSIBILITY.

THIS WARRANTY IS LIMITED TO THE BUYER AND IS NOT TRANSFERABLE. THIS EXPRESS LIMITED WARRANTY EXCLUDES ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESSED, IMPLIED, OR STATUTORY, BY ANY LITERATURE, DATA, OR PERSON. CULTEC, INC. EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE WITH RESPECT TO THE GOODS SOLD. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTIONS SET FORTH IN THIS LIMITED WARRANTY, NOTWITHSTANDING ANY KNOWLEDGE OF CULTEC, INC. REGARDING THE USE OR USES INTENDED TO BE MADE OF GOODS, PROPOSED CHANGES OR ADDITIONS TO GOODS, OR ANY ASSISTANCE OR SUGGESTIONS THAT MAY HAVE BEEN MADE BY CULTEC, INC. PERSONNEL. BUYER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF CULTEC, INC. PRODUCTS FOR BUYER'S USE OR RESALE, OR FOR INCORPORATING THEM INTO OBJECTS OR APPLICATIONS WHICH BUYER DESIGNS, ASSEMBLES, CONSTRUCTS OR MANUFACTURES.

CULTEC, INC. WILL NOT BE RESPONSIBLE OR LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, HOWEVER ARISING, INCLUDING BUT NOT LIMITED TO THOSE FOR USE OF ANY PRODUCTS, LOSS OF TIME, INCONVENIENCE, LOST PROFIT, LABOR CHARGES, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES WITH RESPECT TO PERSONS, BUSINESS, OR PROPERTY, WHETHER AS A RESULT OF BREACH OF WARRANTY, NEGLIGENCE OR OTHERWISE. NOTWITHSTANDING ANY OTHER PROVISION OF THIS LIMITED WARRANTY, BUYER'S REMEDY AGAINST CULTEC, INC. FOR GOODS SUPPLIED OR FOR NON-DELIVERED GOODS OR FAILURE TO FURNISH GOODS, WHETHER OR NOT BASED ON NEGLIGENCE, STRICT LIABILITY OR BREACH OF EXPRESS OR IMPLIED WARRANTY, IS LIMITED SOLELY, AT CULTEC, INC.'S OPTION, TO REPLACEMENT OF OR CURE OF SUCH NONCONFORMING OR NON-DELIVERED GOODS OR RETURN OF THE PURCHASE PRICE FOR SUCH GOODS AND IN NO EVENT SHALL EXCEED THE PRICE OR CHARGE FOR SUCH GOODS. CULTEC, INC.'S MAXIMUM LIABILITY UNDER THIS EXCLUSIVE REMEDY SHALL NEVER EXCEED THE COST OF THE SUBJECT PRODUCT. CULTEC, INC. RESERVES THE RIGHT, AT ITS SOLE DISCRETION, TO REFUND THE PURCHASE PRICE IN LIEU OF REPAIR OR REPLACEMENT.



CULTEC

Chamber of Choice™

CULTEC, Inc.

878 Federal Road • P.O. Box 280 • Brookfield, CT 06804 USA

Phone: 203-775-4416 • Toll Free: 1-800-4-CULTEC • Fax: 203-775-1462

Web: www.cultec.com • E-mail: custservice@cultec.com

