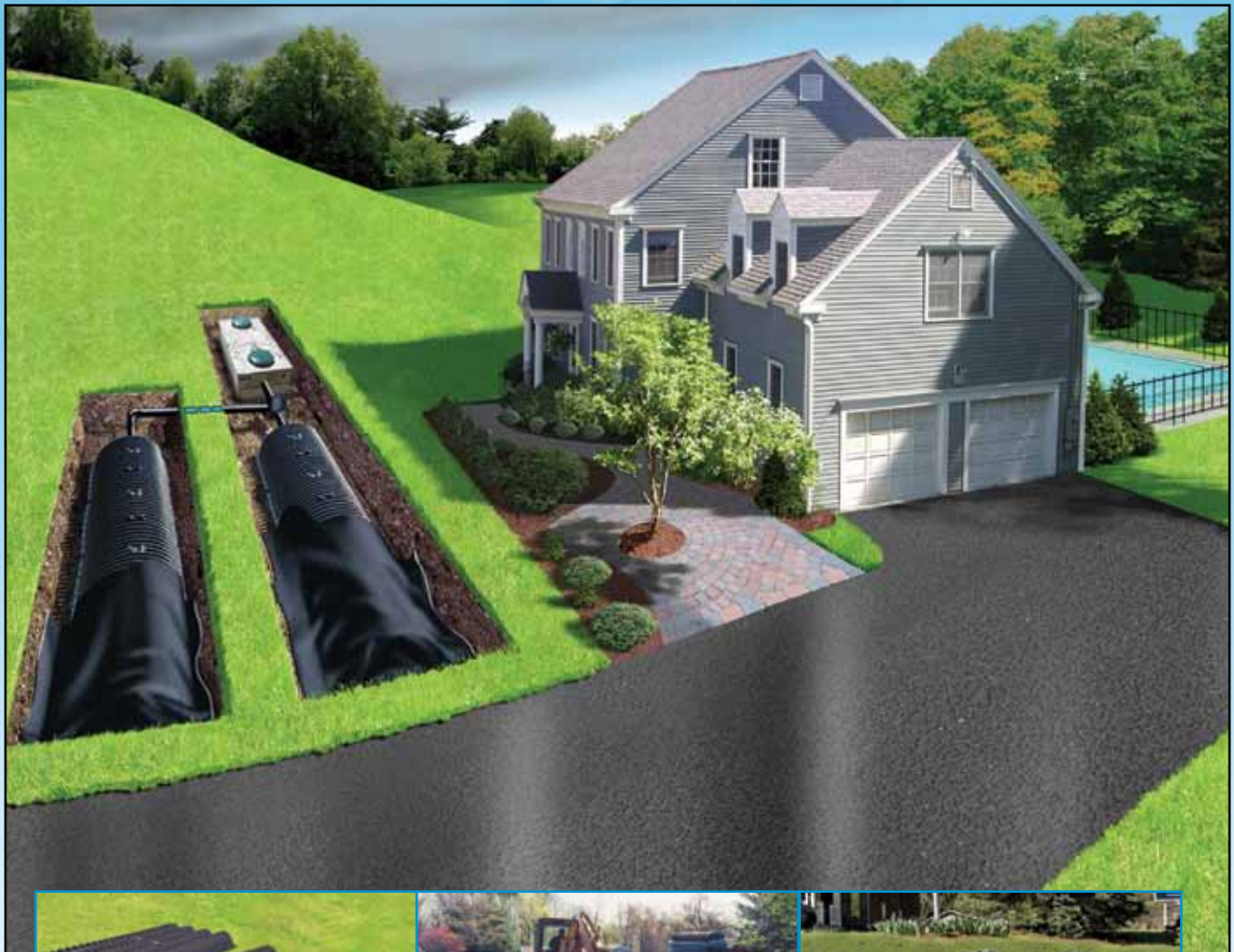


Contactor® & Recharger® Septic Chambers



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

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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.

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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

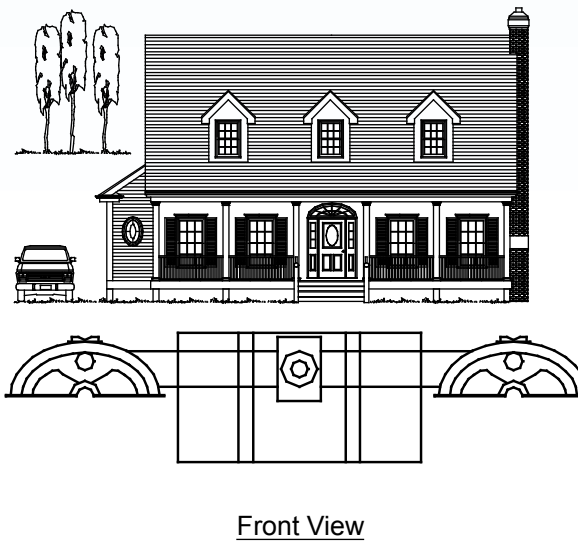
Model	Deflection (per 100')
Contactor® Field Drain™ C-4 and C-4HD	1'
Contactor® EZ-24 and EZ-24HD	25'
Contactor® 100 and 100HD	6'
Recharger® 150XLHD	5'
Recharger® 180HD	6'
Recharger® 280HD	6'
Recharger® 330XLHD	5'

CULTEC Septic Chambers

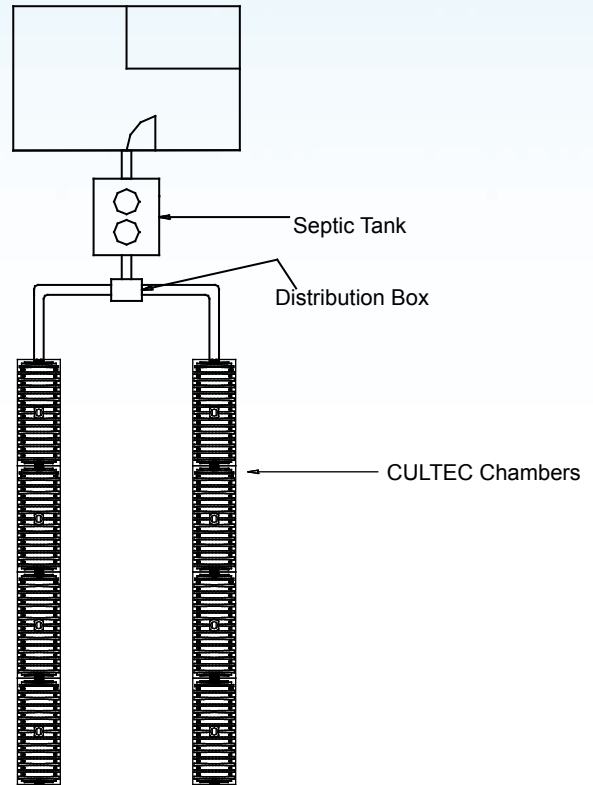
Preparation

- 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



Front View

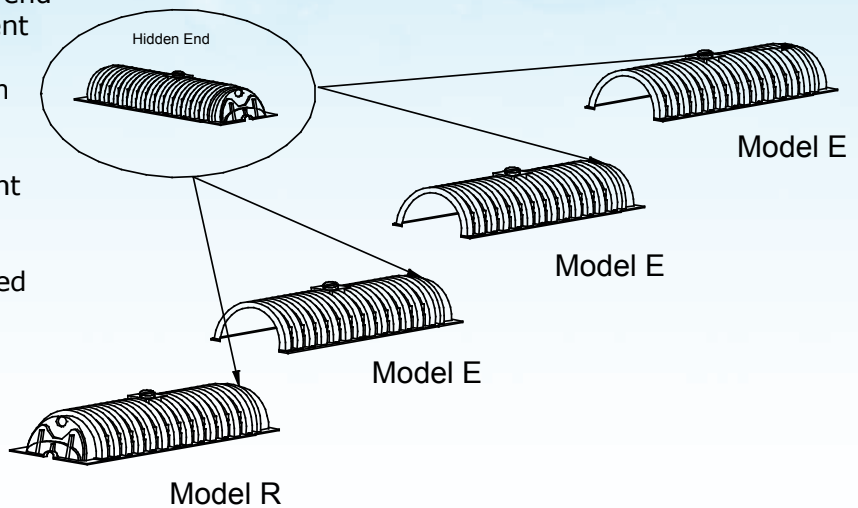


Top View

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

Chamber Installation in a Typical Gravity System

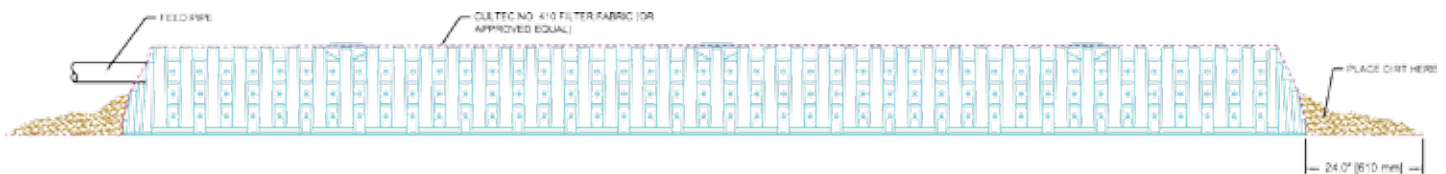
- Set the starter unit (Model R) in the trench. Position the large rib end of the chamber toward the effluent feed pipe to start the line.
- OPTIONAL (See fabric installation if not using a splash deflector): Place a splash deflector under the feed pipe discharge to prevent rutting of the base soil.
- 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.

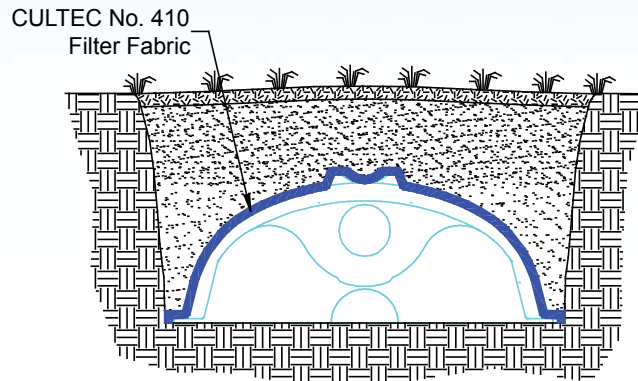


Filter Fabric Installation Profile View

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

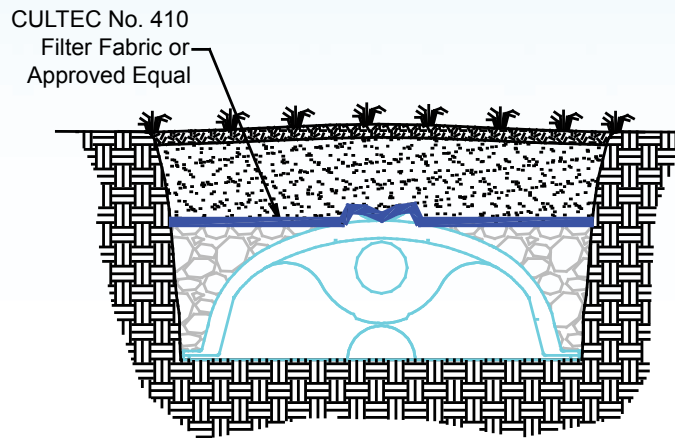
Use the recommended fabric width for each chamber. Calculate fabric required.

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
Contactor® Field Drain™ C-4 and C-4HD	8.00'	0.50'	7.50'	5.50'
Contactor® EZ-24 and EZ-24HD	8.00'	0.50'	3.00'	6.00'
Contactor® 100	7.40'	0.60'	4.00'	6.00'
Contactor® 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:

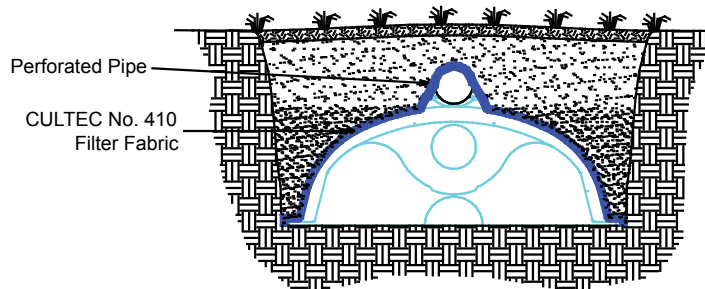
- **Material used to backfill the CULTEC Chamber System should be clean, permeable and approved.**
- **Prior to backfilling the chambers, the system must be inspected by the local health department.**

- 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.

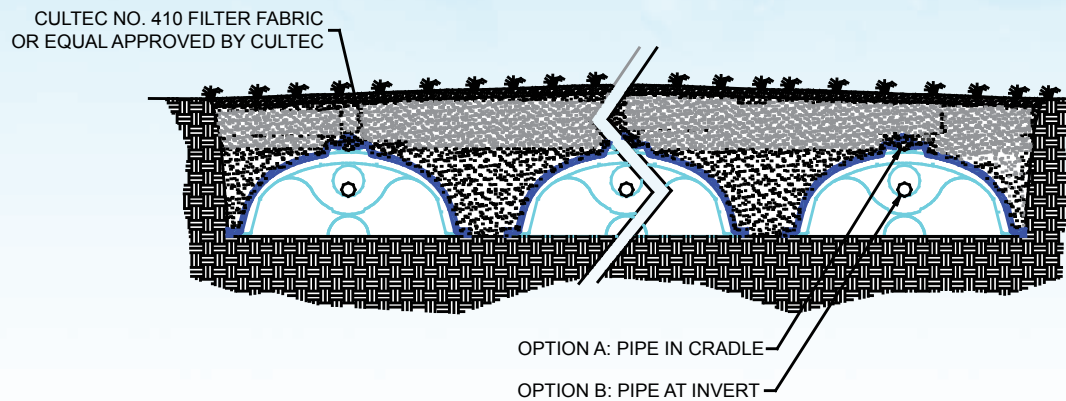
Pipe Distribution System (PDS) Installation



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

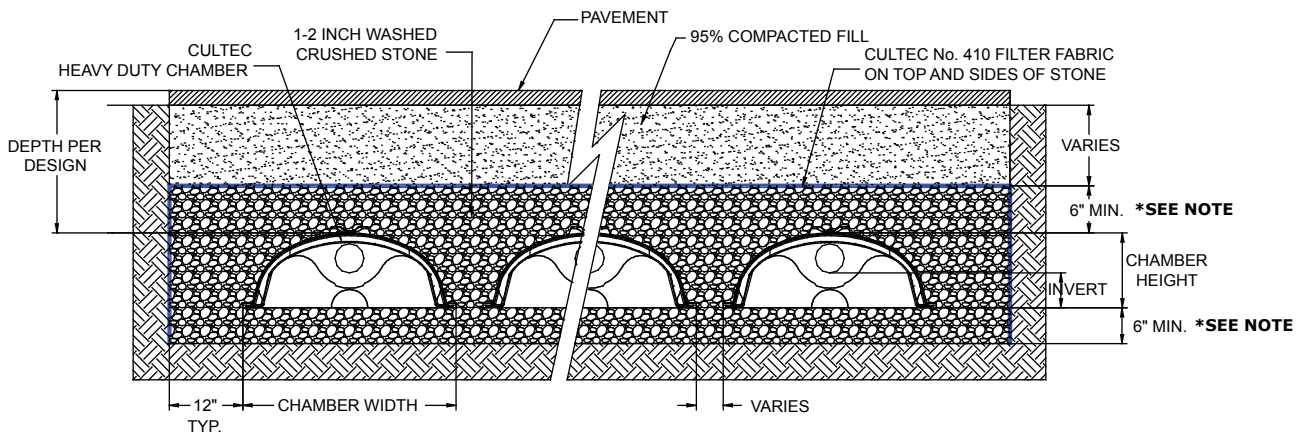
Installation Instructions for Septic System in Traffic Application

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'

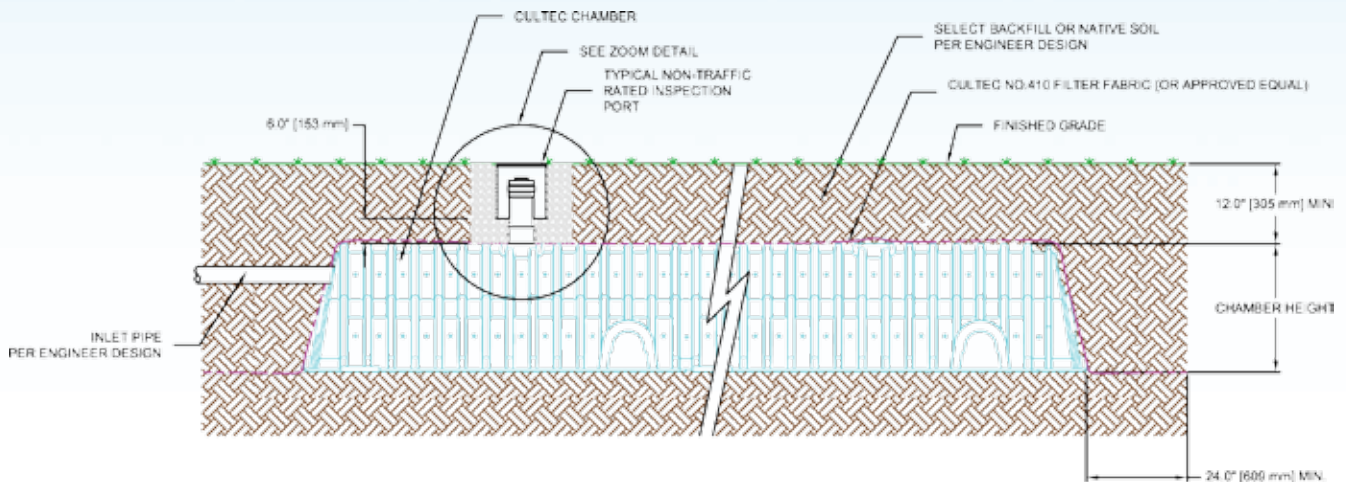
* For unpaved traffic applications, contact CULTEC, Inc.



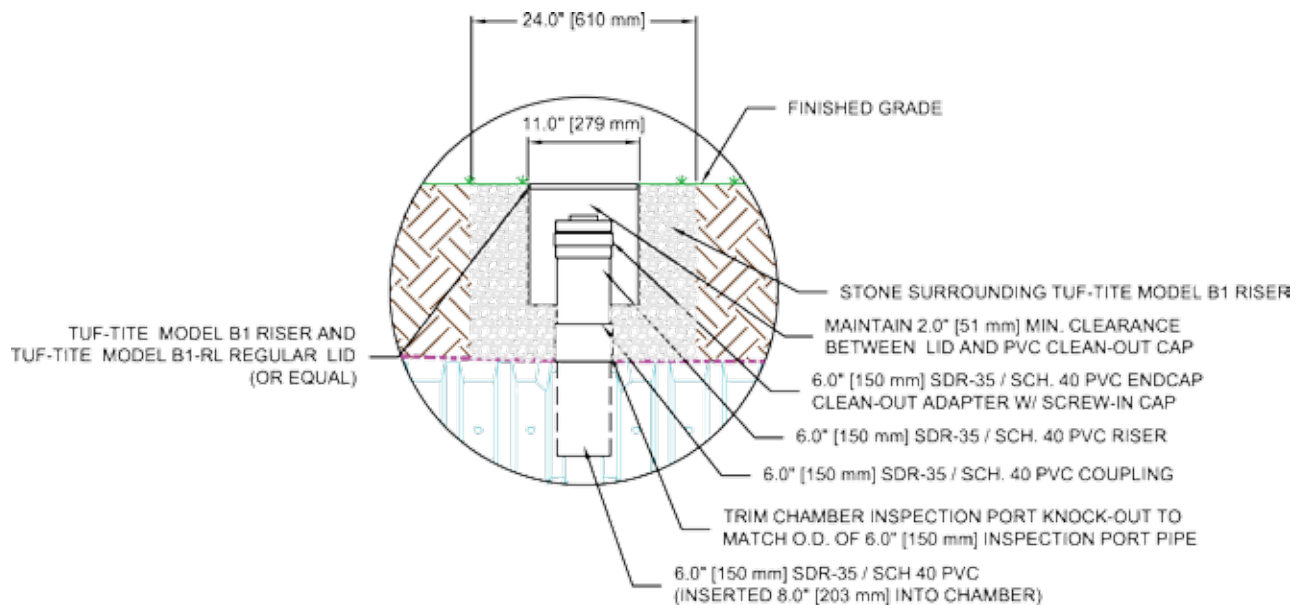
Typical Paved Traffic Septic Detail
(note: min. 9" stone base and min. 12" stone above required for Recharger 900HD)

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.

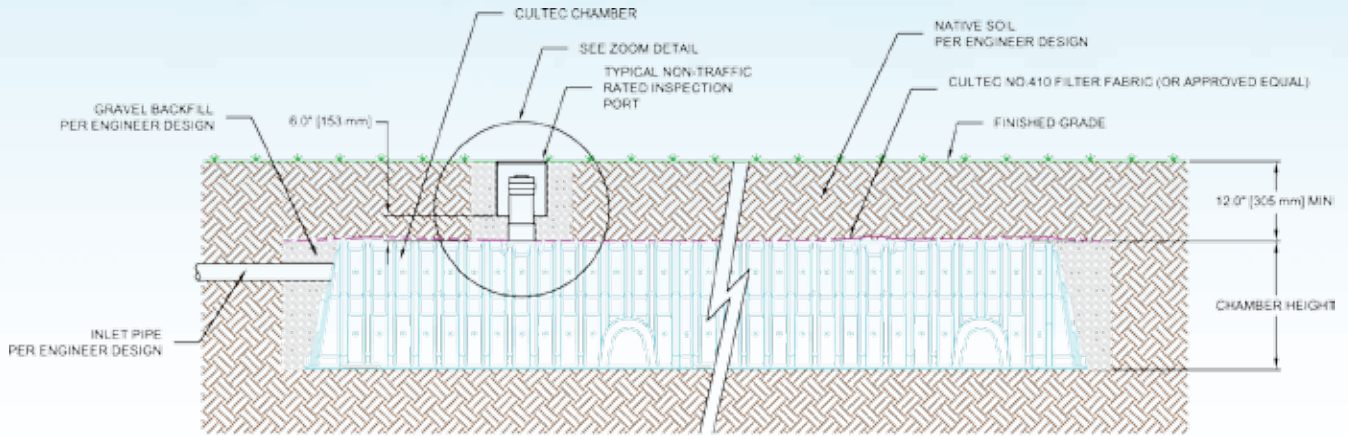


Typical Inspection Port Detail for Non-Traffic Application

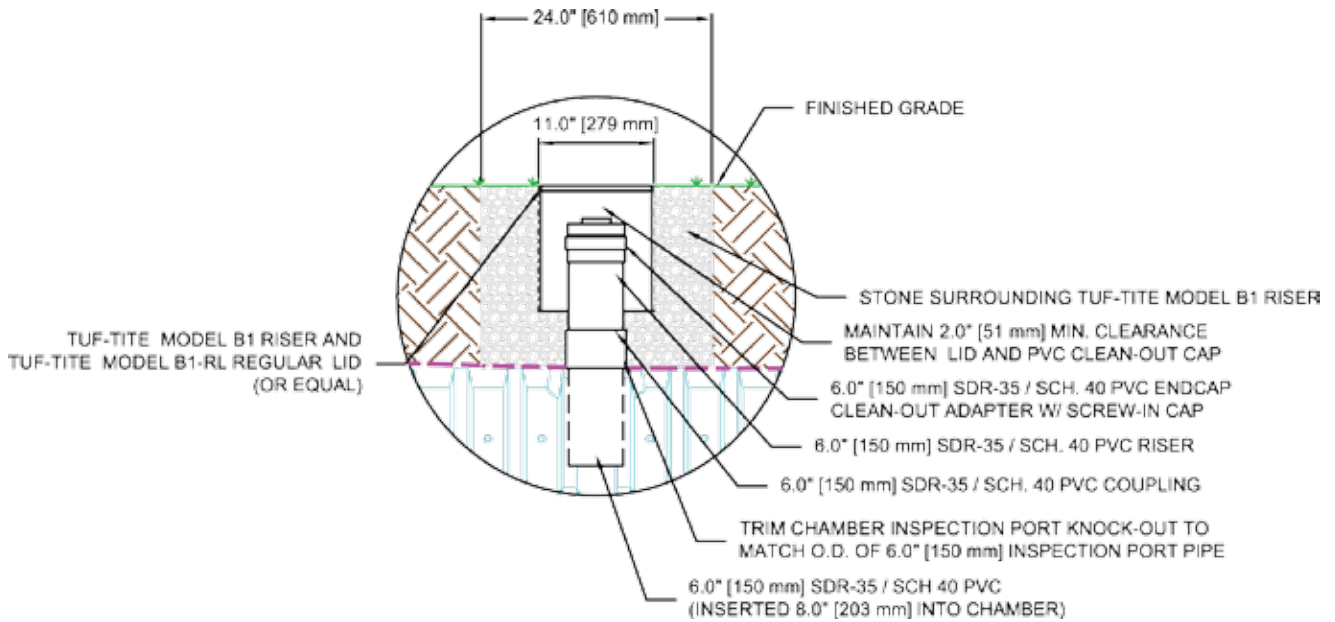


CULTEC Septic Chambers

Optional Inspection Port (continued)



Typical Inspection Port Detail for Traffic Applications



1-Yr. Limited Warranty



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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

Ti SALES

36 Hudson Rd
Sudbury MA 01776



800-225-4616
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