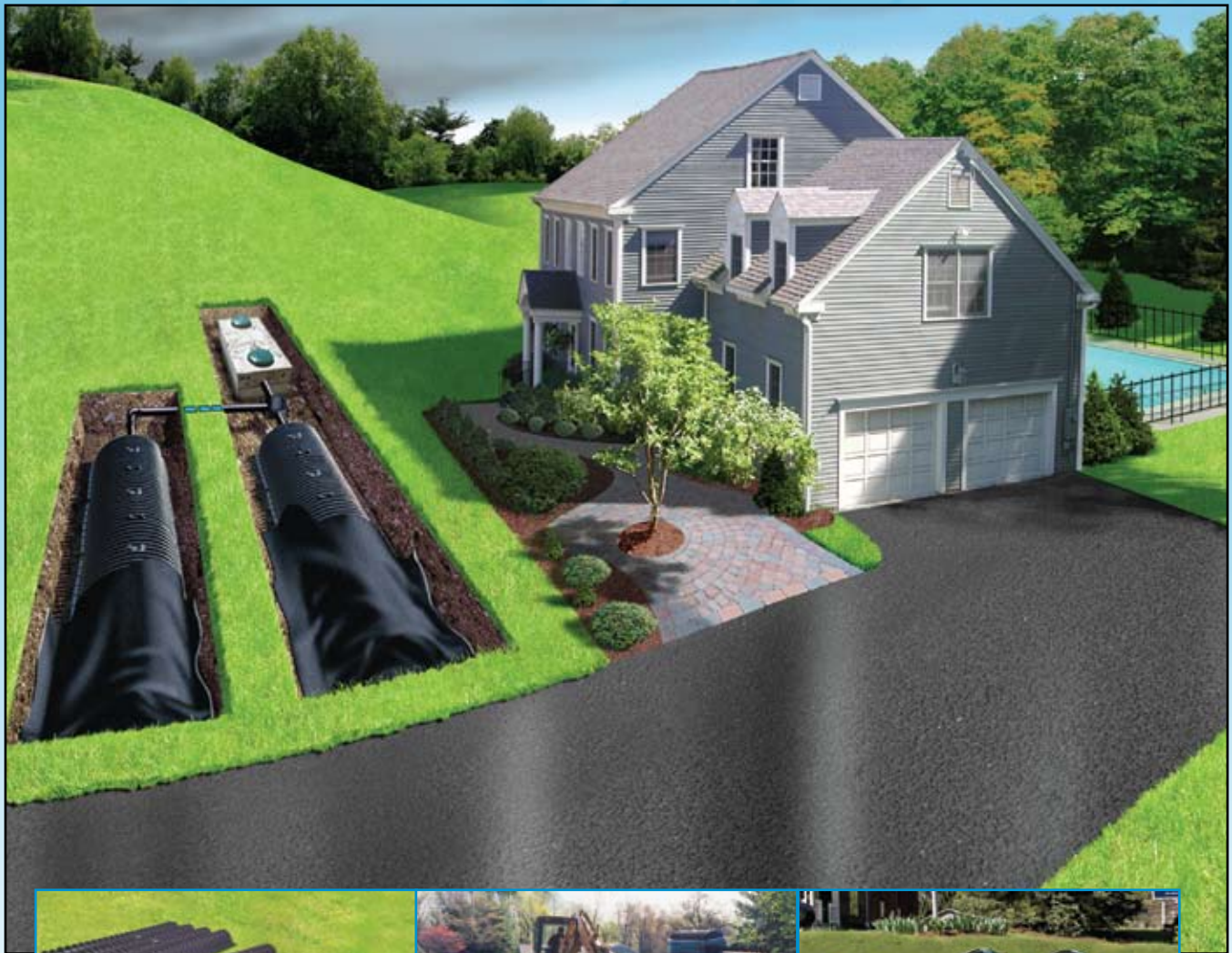


Contactor® & Recharger® Septic Chambers



2009 Installation Guide Book

CULTEC Septic Chambers

CULTEC Chambers: The New Standard in Leachfields

The CULTEC Contactor® and Recharger® chambers are the alternative to conventional pipe and stone or concrete leach-field 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 gravel-less septic system consists of:

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

System benefits:

- Reduced soil absorption system area
- Greater contact with primary leaching area promotes maximum infiltration capabilities
- Lightweight
- Gravel-less installation allows for less heavy equipment time
- Patented overlapping rib connection is fast and easy to install
- Repeating support panel adds to strength of installation
- Long structural life expectancy
- Able to transport in a pick up truck

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

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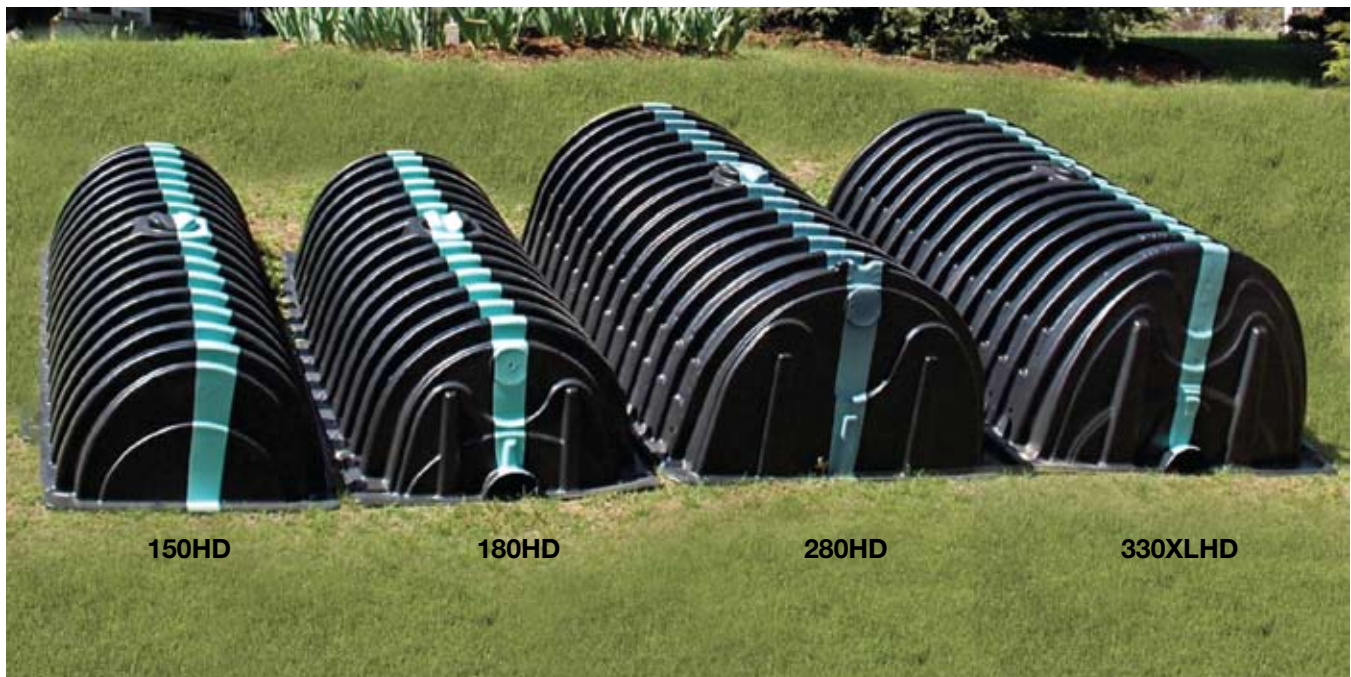
CULTEC Septic Chambers

CULTEC Chamber Product Lines

The CULTEC Contactor® Series



The CULTEC Recharger® Series



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

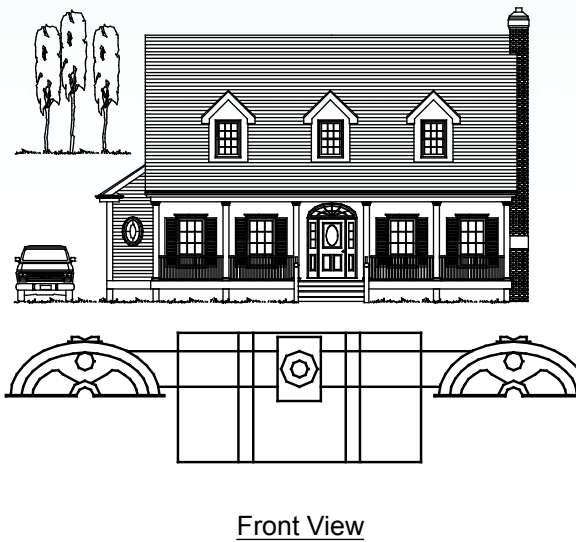
MODEL	AVAILABLE DEFLECTION (PER 100')
Contactor® Field Drain™ C-4	1'
Contactor® EZ-24	25'
Contactor® 100	6'
Contactor® 125	8'
Recharger® 150	6'
Recharger® 180	6'
Recharger® 280	6'
Recharger® 330XL	5'

CULTEC Septic Chambers

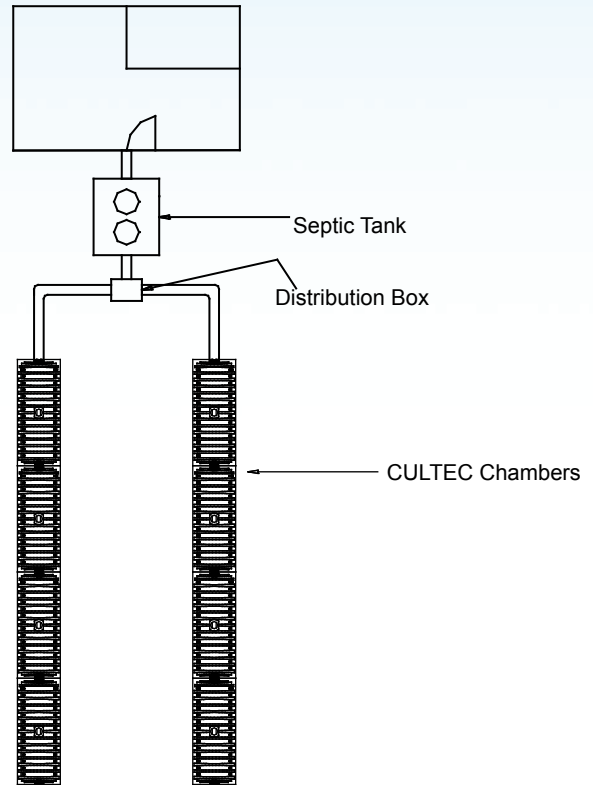
Preparation

- 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. 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

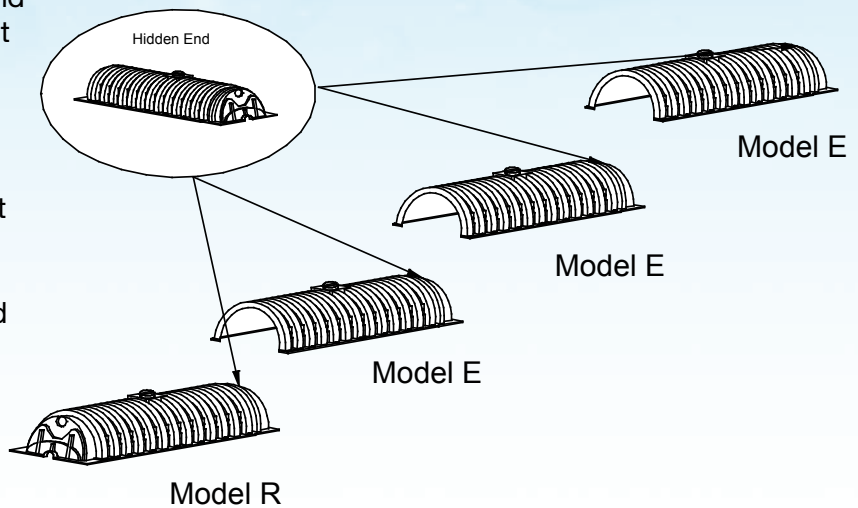


Top View

MODEL	HEIGHT	WIDTH	MIN. RECOMMENDED TRENCH WIDTH
Contacto [®] Field Drain [™] C-4	8.5"	48"	52"
Contacto [®] EZ-24	12.5"	16"	18"
Contacto [®] 100	12.5"	36"	39"
Contacto [®] 125	18.0"	30"	36"
Recharger [®] 150	18.0"	33"	36"
Recharger [®] 180	20.5"	36"	40"
Recharger [®] 280	26.5"	47"	52"
Recharger [®] 330XL	30.5"	52"	56"

Chamber Installation in a Typical Gravity System

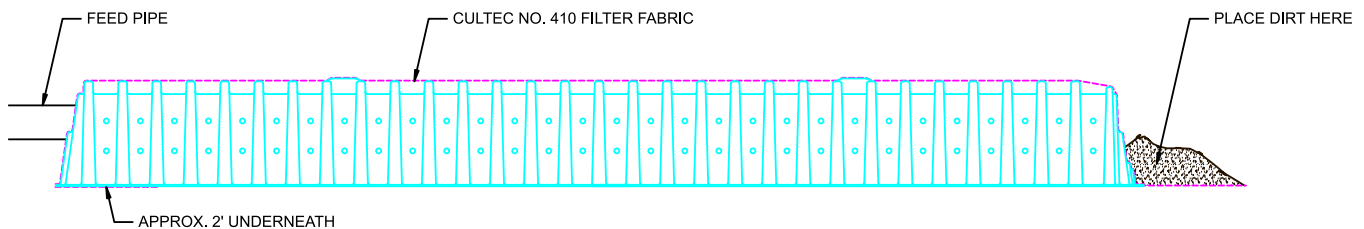
- Set the starter unit (Model R) in the trench. Position the large rib end of the chamber toward the effluent feed pipe to start the line.
- OPTIONAL (See fabric installation if not using a splash deflector): Place a splash deflector under the feed pipe discharge to prevent rutting of the base soil.
- 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 Aggregate – Free Septic System Systems Without Stone

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 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.
- Before the starting CULTEC chamber is put in place, lay approximately 1½ – 2 feet of the properly sized CULTEC No. 410™ Filter Fabric on the ground at the beginning of the line.
- 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.

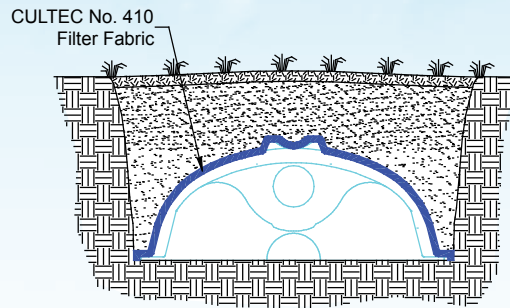


Filter Fabric Installation Profile View

CULTEC Septic Chambers

Installation of the Fabric Interface for a Aggregate – Free Septic System

Systems Without Stone (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.

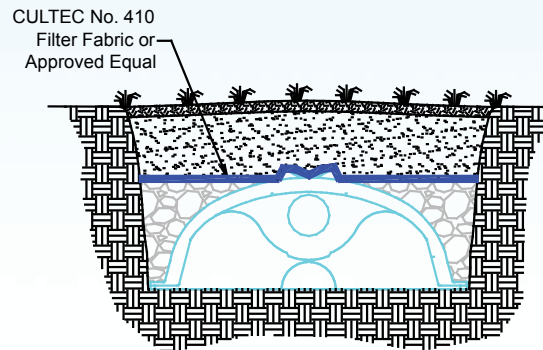
LF of Fabric Required: LF of system + 10% for waste = _____ LF fabric

MODEL	INSTALLED CHAMBER LENGTH	INSTALLED CHAMBER LENGTH ADJUSTMENT	FABRIC ROLL WIDTH	FABRIC LENGTH TO ADD TO LINE OF CHAMBERS
Contacto [®] Field Drain™ C-4	8.00'	0.50'	7.50'	5.50'
Contacto [®] EZ-24	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'
Contacto [®] 125	6.25'	1.25'	4.00'	7.00'
Recharger [®] 150	7.50'	1.00'	4.00'	7.50'
Recharger [®] 180	6.33'	1.00'	5.00'	7.50'
Recharger [®] 280	7.00'	1.00'	7.50'	9.00'
Recharger [®] 330XL	7.00'	1.50'	7.50'	9.00'

Installation of the Fabric Interface for an Aggregate Septic System

Systems With Stone

- Determine the trench or bed area by multiplying the length and width. Then, add 10% for overlaps or waste.
- Filter fabric is placed at the interface of the top of the stone and the soil prior to final backfilling.
- Place filter fabric (small piece) over the end section of the final chamber, covering the 4" invert.



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	INSTALLED CHAMBER LENGTH ADJUSTMENT	FABRIC ROLL WIDTH	FABRIC LENGTH TO ADD TO LINE OF CHAMBERS
Contacto [®] Field Drain [™] C-4	8.00'	0.50'	5.00'	5.50'
Contacto [®] EZ-24	8.00'	0.50'	3.00'	6.00'
Contacto [®] 100	7.40'	0.60'	4.00'	6.00'
Contacto [®] 100 HD	7.50'	0.50'	4.00'	6.00'
Contacto [®] 125	6.25'	1.25'	4.00'	7.00'
Recharger [®] 150	7.50'	1.00'	4.00'	7.50'
Recharger [®] 180	6.33'	1.00'	4.00'	7.50'
Recharger [®] 280	7.00'	1.00'	7.50'	9.00'
Recharger [®] 330XL	7.00'	1.50'	7.50'	9.00'

CULTEC Septic Chambers

Backfilling the System

NOTE:

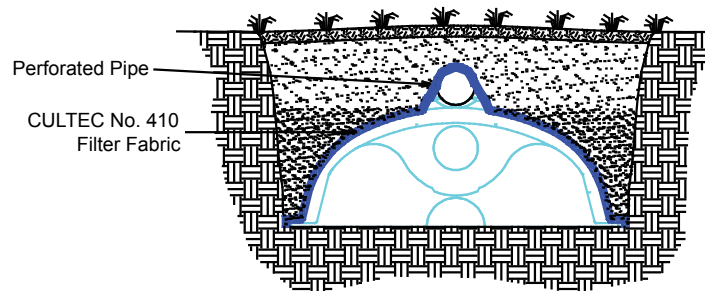
- Material used to backfill the CULTEC Chamber System should be clean, permeable and approved.
- Prior to backfilling the chambers, the system must be inspected by the local health department.

- 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 grade, it is best to use a small track machine.
- **When necessary to track over the system**, traverse perpendicular to the line of chambers (only when backfilled to recommended height.)
- Proceed to set 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.

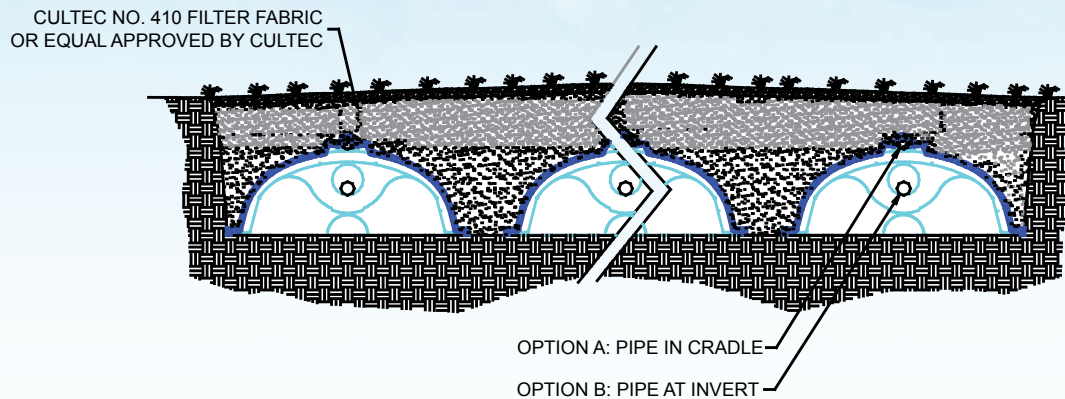
Pipe Distribution System (PDS) Installation



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 set 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

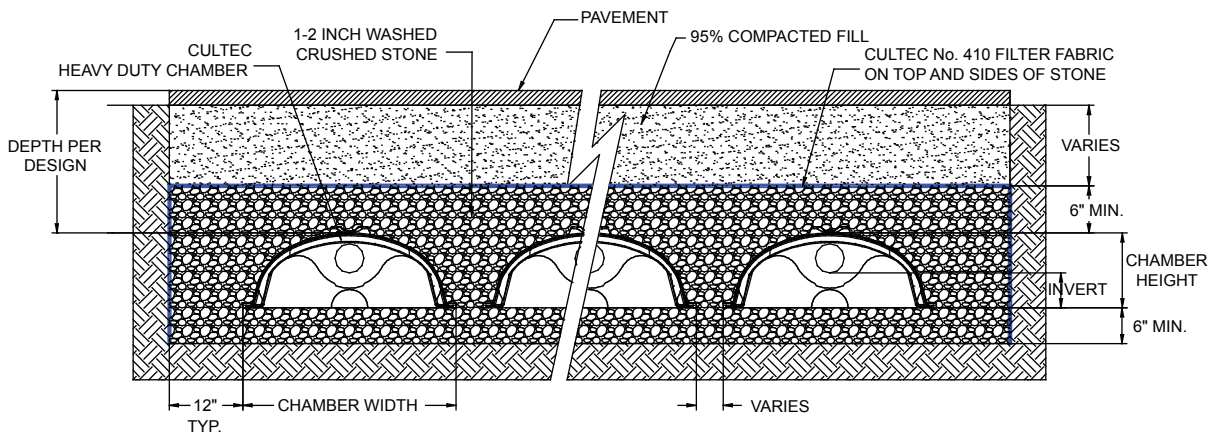
Installation Instructions for Septic Application in Traffic Area

NOTE: Contact CULTEC Technical Assistance for more details.

Minimum Cover Requirements for Traffic Installations under Pavement

MODEL <i>Only Heavy Duty Models should be used</i>	RECOMMENDED MINIMUM COVER <i>*(Pavement height not included)</i>
Contacto [®] r Field Drain [™] C-4HD	14"
Contacto [®] r EZ-24HD	14"
Contacto [®] r 100HD	14"
Contacto [®] r 125HD	12"
Recharger [®] 150HD	14"
Recharger [®] 180HD	14"
Recharger [®] 280HD	18"
Recharger [®] 330XLHD	18"

** For unpaved traffic applications, contact CULTEC, Inc.*



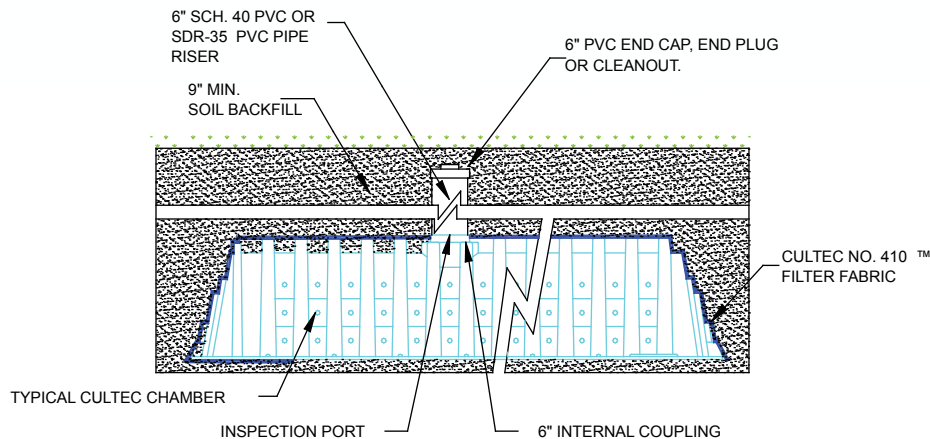
Typical Paved Traffic Septic Detail

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 location in the center of any chamber.

Under non-traffic lawn areas:

- Cut 6" diameter hole at top of chamber in the center of the unit.
- Insert a 6" internal coupling into the inspection port opening.
- Use 6" SCH 40 or SDR-35 PVC to bring the inspection port to grade.
- Install a 6" PVC end cap, end plug or cleanout over the pipe.
- Backfill per previous instructions.



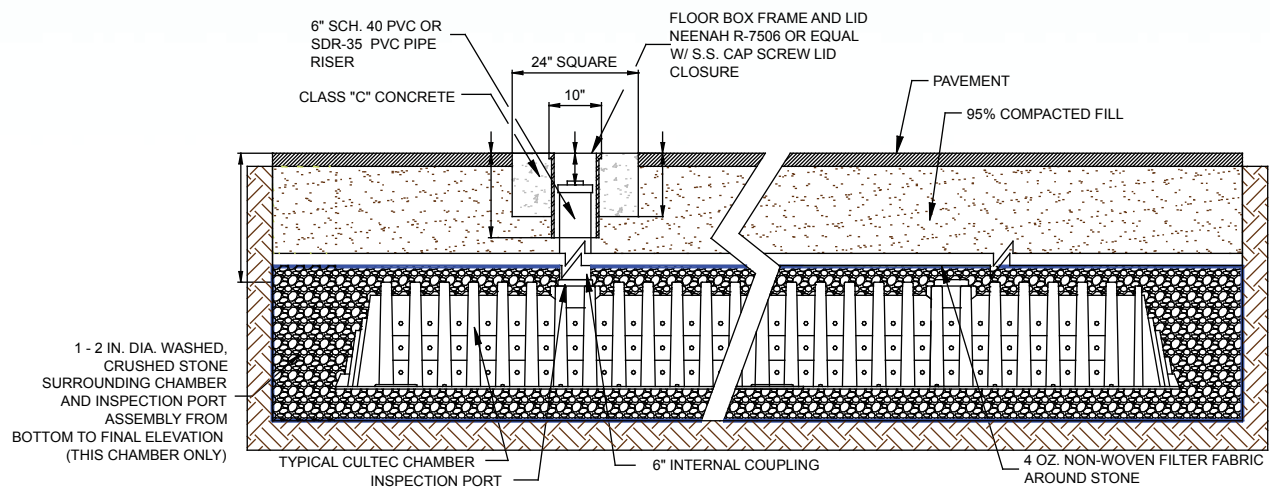
Typical Inspection Port Detail for Non-Traffic Application

CULTEC Septic Chambers

Optional Inspection Port *(continued)*

Under paved areas:

- Cut 6" diameter hole at top of chamber in the center of the unit.
- Insert a 6" internal coupling into the inspection port opening.
- Use 6" SCH 40 or SDR-35 PVC to bring the inspection port to grade.
- Install a 6" PVC end cap, end plug or cleanout over the pipe.
- Place a 24" square x 12" high Class "C" concrete box with a 10" diameter opening around the inspection port just below grade.
- Place a CULTEC Inspection Cover or Floor Box Frame and Lid Neenah R-7506 or equal w/S.S. cap screw lid closure on the 6" pipe.
- Install a minimum required backfill of 1½" – 2" washed crushed stone over top of chamber.
- Finish with 2.5" of asphalt.



Typical Inspection Port Detail for Traffic Applications

10-Year Limited Warranty

CULTEC, Inc.'s finished chamber products, when properly installed and operated under normal conditions of use, are warranted by CULTEC, Inc. to be free from defects in material and workmanship for a period of ten (10) years from the date of purchase from CULTEC, Inc. or an authorized CULTEC, Inc. Representative or Distributor. In order to obtain performance under this warranty, the buyer must promptly (in no event later than forty-five (45) days after discovery of the defect) give written notice of the defect to CULTEC, Inc., at 878 Federal Road, P.O. Box 280, Brookfield, CT 06804. Buyer is responsible for freight charges both to and from CULTEC, Inc. in all cases.

This Warranty does not apply to installation piping and/or other parts not supplied and produced by CULTEC, Inc. CULTEC, Inc.'s 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 chamber Product. This Warranty also does not apply to shipping or in transit damage.

THIS WARRANTY IS LIMITED TO THE ORIGINAL PURCHASER. THIS WARRANTY DOES NOT APPLY TO PRODUCT NOT INSTALLED ACCORDING TO CULTEC WRITTEN INSTALLATION INSTRUCTIONS.

THIS WARRANTY IS EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

THIS EXPRESS WARRANTY EXCLUDES ALL OTHER WARRANTIES OR REPRESENTATIONS EXPRESSED OR IMPLIED BY ANY LITERATURE, DATA, OR PERSON. 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, 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, penalties or punitive damages, 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 warranty, BUYER'S REMEDY AGAINST CULTEC, INC. FOR GOODS SUPPLIED OR FOR NONDELIVERED 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. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTIONS SET FORTH IN THIS 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. This Warranty can not be modified or extended except by a writing signed by an authorized officer of CULTEC, Inc.

CUSTOMER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF CULTEC, INC. PRODUCTS FOR CUSTOMER'S USE OR RESALE, OR FOR INCORPORATING THEM INTO OBJECTS OR APPLICATIONS WHICH CUSTOMER DESIGNS, ASSEMBLES, CONSTRUCTS OR MANUFACTURES. THIS WARRANTY DOES NOT COVER IMPROPER SIZING, IMPROPER SITING, THE PLACEMENT OF INAPPROPRIATE MATERIALS INTO THE CHAMBER PRODUCTS, OR FAILURE TO MAINTAIN THE MINIMUM AND APPROPRIATE FILL MATERIAL COVER OR ANY OTHER EVENT NOT CAUSED BY CULTEC, INC.

The original receipt for the goods must be included with the documentation supporting any claim under the terms of this Limited Warranty.



CULTEC
Chamber of Choice™

CULTEC, Inc.

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