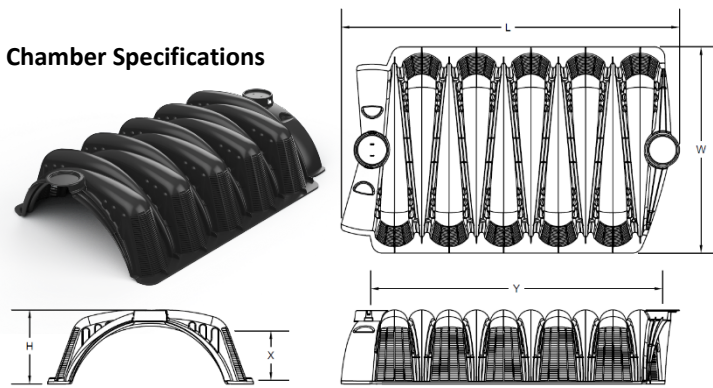


Overview

Prinsco Pro4 Chambers are a highly efficient, gravelless drainfield solution for residential and commercial septic systems. They were specifically designed for professional contractors who are looking for cost efficiency, delivery convenience, ease of installation, and application flexibility while maximizing drainfield infiltration area.

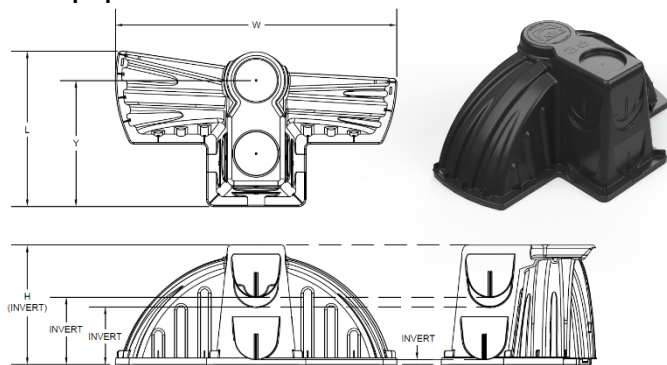
Pro4 chambers are designed to exceed the requirements of the International Association of Plumbing and Mechanical Officials (IAPMO) standards. The Pro4's unique, asymmetrical arches provide maximum structural performance to meet the demands of today's drainfield installations. Their interlocking coupler allows for 10° of joint articulation in either direction for contoured trench or bed applications.

Chamber Specifications



Pro4 Chamber Specifications			
Chamber	Pro4/24	Pro4/36	Pro4/36 HC
Dimensions (L x W x H)	55" x 22" x 12"	56" x 34" x 12"	56" x 34" x 16"
Effective Length (Y)	48"	48"	48"
Chamber Storage	32 gal	51 gal	65 gal
Sidewall Height (X)	8.5"	8.5"	12.2"
Open Bottom Area	6.4 ft ²	9.8 ft ²	9.8 ft ²
Weight	11 lbs	14.5 lbs	17 lbs

Endcap Specifications



Pro4 Endcap Specifications			
Endcap	Pro4/24	Pro4/36	Pro4/36 HC
Dimensions (L x W x H)	16" x 20" x 12"	16" x 29" x 12"	16.5" x 29 x 16"
Effective Length (Y)	13"	13"	13.5"
Invert Elevations	0.5", 6", 7", 12"	0.5", 6", 7", 12"	0.5", 10", 11", 16"
Endcap Storage	4.5 gal	7 gal	10 gal
Weight	2.7 lbs	3.6 lbs	4.5 lbs

Pressure Distribution Installation

Before you begin the installation, read these instructions and any documents referenced in it. Pro4 chambers may only be installed per State and/or local regulations and, like all drainfields, must have prior site and soil conditions approved. Contact your local health department if the chamber installation requirements need clarification.

Required materials and tools:

- Pro4 Chambers and Endcaps
- PVC pipe and couplings
- Excavating equipment
- Leveling equipment
- Shovel and rake
- Measuring device
- Cordless drill, drill-bits, and hole-saw

Site Preparation

Do not install the system when there are wet soil conditions. Install erosion control prior to installation if necessary to protect the site.

Step 1: Establish the location of the system components, including trenches and mark out accordingly. Set the elevations for the system components and chamber system according to plan and per state and local codes. Refer to the Vehicle Loading section for specified cover requirements. Follow minimum trench spacing per state and local codes.

Step 2: Trenches should be level. Trench widths should be per the following trench width chart.

Minimum Trench Width Requirements	
Pro4/24	24"
Pro4/36	36"
Pro4/36 HC	36"

For jurisdictions requiring sloped trenches, measure and verify necessary trench bottom slope.

Step 3: Clear any debris within the trench and hand rake the trench bottom. If any bottom or sidewall smearing has occurred, scarify those surfaces.

Step 4: Place pressure lateral pipe on the ground for each chamber row.

Note: Follow local and state pressure distribution regulations when preparing the pipe.

Step 5: Drill pressure pipe orifices per plan (diameter and spacing). Orifices should be located at the top of the pipe.

Step 6: Drill a drain hole at the end of the pressure lateral on the bottom to allow for pipe drainage after each dose. Drain holes should be above the splash plate to prevent erosion.

Note: A pressure test (squirt test) may be required by the local health department prior to chamber installation.

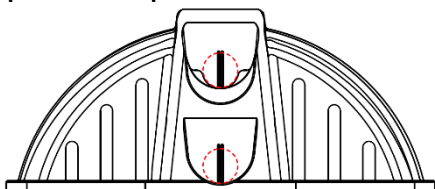
Preparing the Pro4 Endcaps

Use the appropriate Pro4 Endcap Model per Pro4 Chamber Size, see Endcap Specifications.

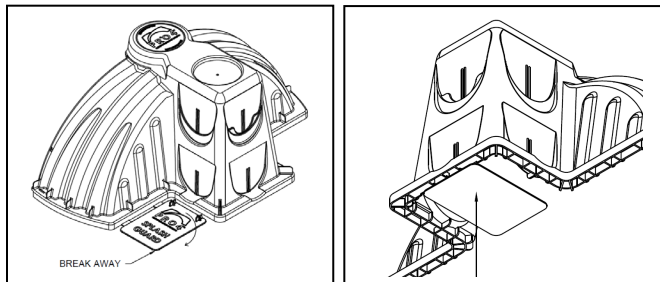
Step 1: Drill an opening in the endcap at the elevation where the pressure pipe will run. The endcap can accommodate up to 2" Schedule 40 pipe.

Note: The pressure pipe lateral can be installed using pipe hanging ties near the ceiling of chamber or installed with the pipe lateral resting on the trench or bed surface.

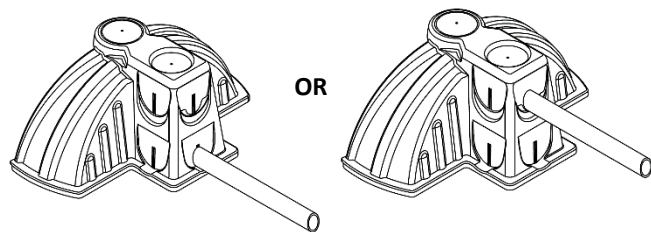
Pro4 Endcap Pressure Pipe Drill Location



Step 2: Install the splash guard by removing the guard from the endcap and inserting the risers of the guard into the channels underneath the endcap footer.

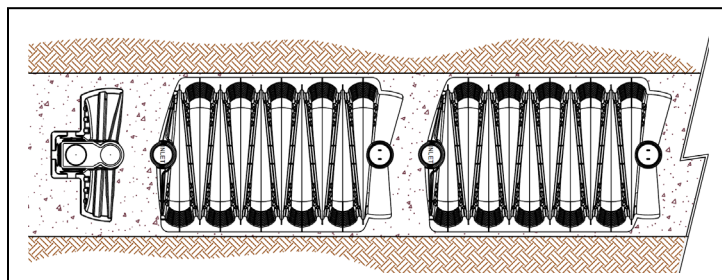


Step 3: Insert the pressure lateral pipe through the drilled endcap hole, connect the lateral pipe to the manifold pipe.



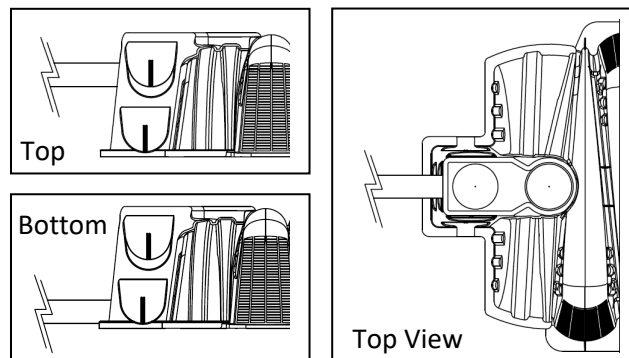
Installing the System / Chamber Assembly

Step 1: Position the first chamber within the start of the trench. The end of the chamber marked **INLET** begins the row and should be facing the header pipe.

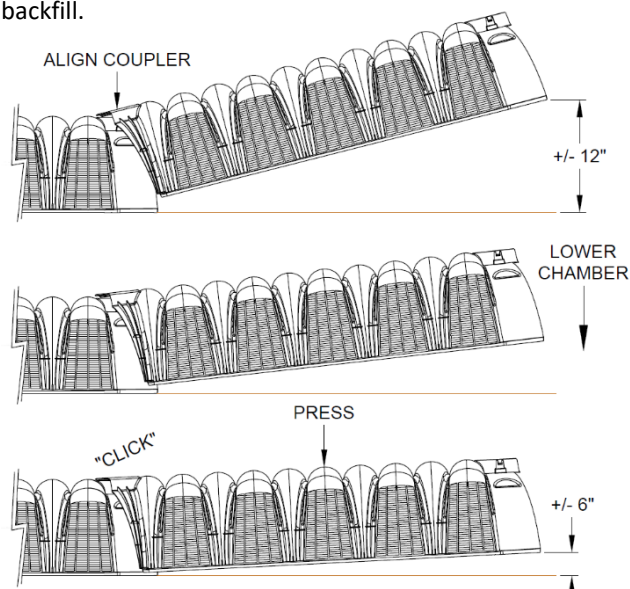


Step 2: Move the prepared endcap along the pressure lateral pipe and over the chamber coupler. The endcap will snap into place with locking tabs when pressed down on the chamber.

Pressure Pipe Inlet Options

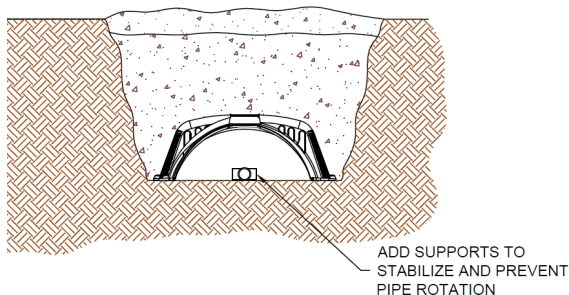


Step 3: With another chamber, place the coupler end marked **INLET** over the previously placed chamber. Lower the chamber towards the ground. Press down on the center of the chamber until a noticeable "click" is heard to obtain full engagement. The chamber-to-chamber coupler has a positive locking feature designed to keep the chambers secure during backfill.



Note: Chambers can be disengaged by lifting the end of chamber away from the connection. Multiple disengagements may cause the locking tabs to break. If this occurs, a screw may be used to connect the chambers.

Step 4A (Pipe on trench or bed bottom): Where regulation allows, pipe is recommended to lay on the bottom of the trench or bed. Stabilize the pipe with cross tees or other method to prevent movement.

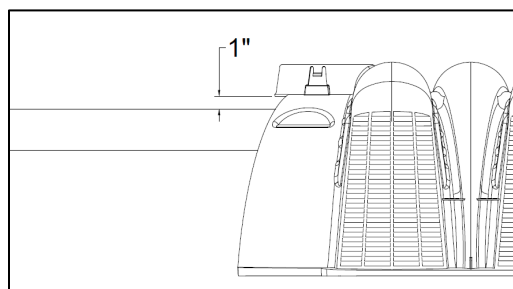


Step 4B (Hanging the pressure pipe): Using plastic pipe hanging ties, fasten the pressure pipe to the ceiling of the chamber at back end using the drain hole slots on the coupler.

Hanging Tie Recommendations

Step A

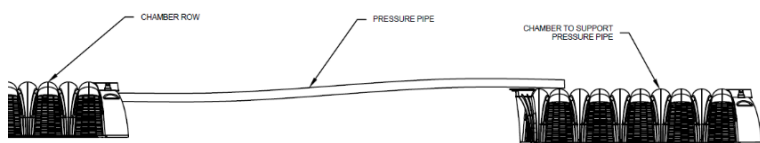
- Feed the hanging tie from underneath the chamber so that the tie connection leaves space between the two couplers.
- Use a finger or spacer to leave a ¼"-1" gap between the pipe and coupler bowl.
- Tighten the hanging tie so that the pressure pipe is level with the underside of the chamber.
- **NOTE: OVER TIGHTENING THE HANGING TIE MAY DEFORM THE BOWL AND DISRUPT CHAMBER CONNECTION**



Step B

- Prior to connecting to the next chamber, place a Pro4 Chamber or Endcap 8'-12' down the line from the last tied connection.
- Rest the pressure pipe on the Pro4 Chamber or Endcap so it can be supported above the sand bed. This takes the pressure off the pipe tie and eliminates potential bowl deflection.
- Connect the next Pro4 Chamber by standard connection method.

Repeat steps A & B



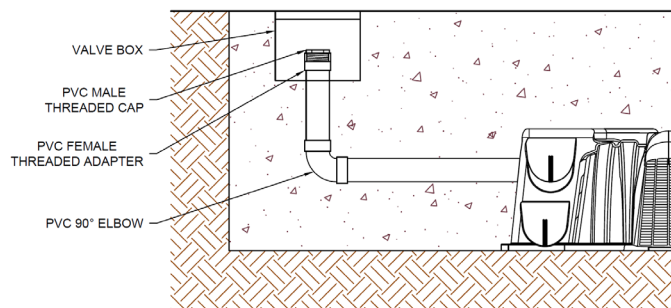
Aligning chambers in bed

- Chamber feet should not be overlapped.
- Sand fill should be leveled and compacted with boots at the feet of the chamber connection so that sand does not interfere between Chamber feet.

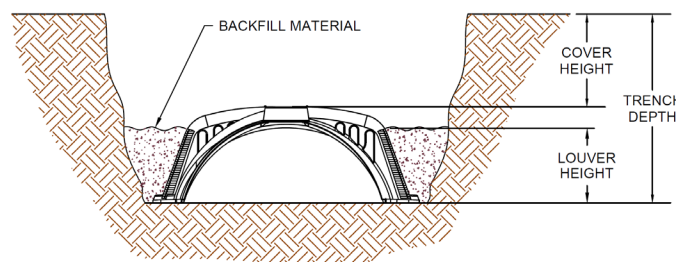
Step 5: For installation following contours, rotate the chambers to align with the trench contour. Pro4 chamber joints can rotate a maximum of 10° in both directions.

Step 6: Continue installing the chambers until the lateral is complete.

Step 7: Install an endcap on the last chamber in the trench. If the pressure pipe is hanging, do not use a hanging tie on the last chamber; rather let the endcap support the pipe. It is recommended to install a clean-out for drainfield maintenance and flushing at the end of each lateral.



Step 8: Once all the chambers and endcaps are installed in a trench lateral, begin backfilling with soil around the sides of the chamber and around the endcaps. Fill soil just above the top of the sidewall louvers. Remove any large rocks that meet the sidewalls.



Step 9: Compact this soil by walking along the sides of each chamber.

Note: Walking in the soil is an important step that will keep the chambers from shifting during final backfill and provide the necessary support when covering the system.

Step 10: Follow this process for each trench.

Installing the Optional Inspection Port

Pro4 Chambers are designed to accommodate an optional inspection port at the beginning and end of trench laterals and mid-line at 4-foot intervals.

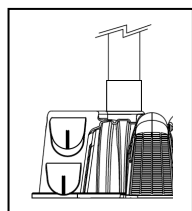
Step 1: On the marked area on the chamber or endcap, use a hole saw to drill for inspection port pipe. The top cut-out sections can accommodate up to 4" Schedule 40 pipe.

Step 2: Insert the section of pipe into the cutout port based on the desired method:

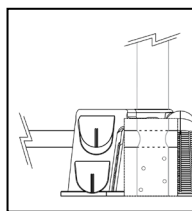
Method A: Pipe extends down only a few inches; supported by a pipe coupler.

Method B: Pipe extends to bottom; hole is drilled through port to allow pressure pipe to pass through.

Method A



Method B



Step 3: Secure the pipe using a screw thru the coupler ring.

Step 4: Fasten either a threaded clean out cap or non-threaded cap to the of the inspection pipe at the specified length to allow access after covering the system.

Covering the Pro4 Chamber System

State and local codes require that chamber systems be inspected and approved prior to backfilling by a health official or other official with jurisdiction.

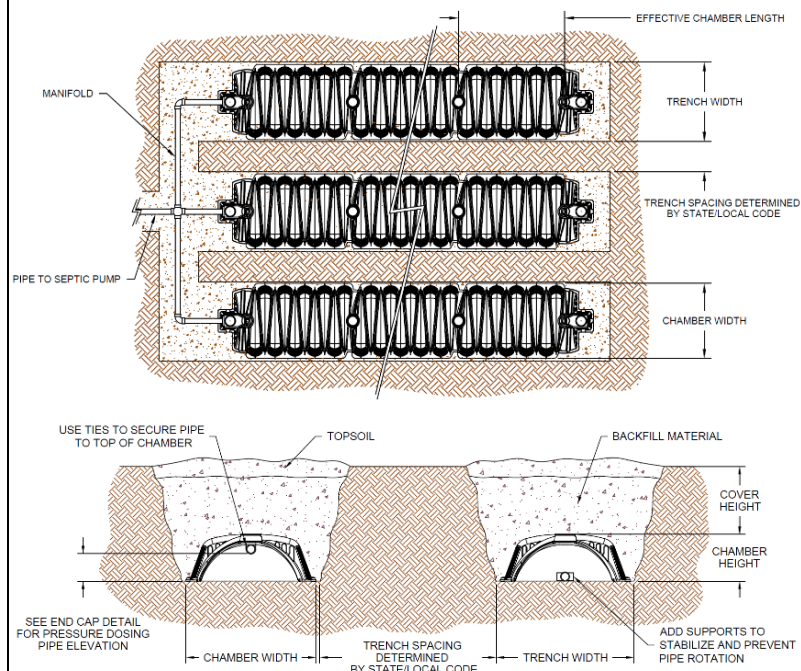
Step 1: Begin by backfilling the trenches with soil using a track-hoe or back-hoe. Remove any large rocks from the soil before backfilling.

Note: A minimum 6" of cover is required for non-traffic application. A minimum of 12" of compacted cover is required before a vehicle can drive over the chamber system. Refer to Vehicle Loading for requirements found below in this document. Pro4 chamber trench applications allow for a maximum of 8' of cover.

Step 2: It is recommended to allow for soil settling by adding 3-4 additional inches soil the system. This additional soil will also help protect against potential erosion.

Step 3: To prevent further erosion, cover the system with seed or sod.

Step 4: For new construction, it is recommended to mark the area around the system to prevent construction vehicles from unknowingly driving over the system.



Vehicle Loading

When operating a vehicle near a chamber drain field system, avoid driving directly over the top of the chamber. Pro4 Chambers require a minimum of 12" of compacted cover over the top of chambers to support AASHTO H-10 loading. This loading is equivalent to 16,000 lbs. per axle. For shallow cover applications installed with 6" of compacted backfill, chambers can support tracked vehicles that are less than 10,000 lbs. gross vehicle weight. When backfilling and driving over a chamber system, do not travel parallel over the length of the chamber rows, but rather perpendicular. Additional soil compaction may occur if heavy equipment is operated over a system. Do not drive over the system when backfilling with sand.

For bed and gravity trench applications see: *Pro4 Bed Installation Instructions & Pro4 Gravity Trench Installation Instructions.*

Prinsco's Pro4 Limited Warranty is available at www.Prinsco.com or call (320) 222-6800.

For questions and technical support: Please contact Prinsco Technical Services at (320) 222-6800 or visit us at www.Prinsco.com.

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