



**Valencia Pipe Company**

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**Best Practices Septic Tank Installation**



Model # 87-41720  
 1000 gallon, 2 Compartment  
 Model # 87-41718  
 1000 gallon, 1 Compartment



Model # 87-41760  
 1500gallon, 2 Compartment  
 Model # 87-41758  
 1500 gallon, 1 compartment

**GENERAL INFORMATION**

- Always check local codes for approvals prior to purchase, delivery, and installation.
  - Select a proper site on your property taking into account slope, soil type, drainage, and possible effects on neighboring property.
  - Apply for permits.
- You'll see "flowable" material mentioned in this overview. What does it mean? Different soils have different capabilities to move water. Clay soils tend to hold water (not good in a septic tank installation) where sandy soils dissipate water quickly. Here's an overview to assist your decision-making process:

<i>Soil Type</i>	<i>Texture</i>	<i>Water Flow (cm/hour)</i>
Sand	Coarse	5.0
Sandy Loam	Coarse	2.5
Loam	Moderately Coarse	1.3
Clay Loam	Moderately Fine	.8
Silty Clay	Fine	.25
Clay	Fine	.05

- Ensure you select a tank properly sized for the number of people and bedrooms in your home. The best way to gauge how big of a septic tank you need is to add up the number of bedrooms on your property. Here's an approximate overview to help you determine the size tank you'll need:

<i># Bedrooms</i>	<i>Minimum Capacity (Gallons)</i>
0 (Small apartments, lofts)	750
1, 2, or 3	1000
4	1250
5	1500
6	1750

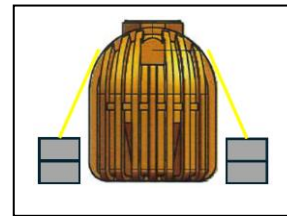
- A septic tank is not the same as an underground water tank (sometimes called a cistern tank).
- A septic tank must be kept full at all times except when performing period pumping. Refill as soon as the pumping/cleaning process is complete.

- It is for septic systems only; not for fresh water storage.
  - Cistern tanks (white) use the same mold but utilize more resin material, making thicker walls. It can be buried in the same manner as a septic tank but can be pumped to ¼ full.
    - It is ideal for fresh water underground storage.
  - Septic tanks and cistern tanks are **not for above ground use.**
- Check local codes for the type of pipe and installation protocols for your area.
  - You may have to use a certain size/type of rock (or sand) to install the feeder line from the home/building to the septic tank itself. Know and adhere to these codes.
- Mark out the chosen tank location allowing an extra 18”-24” around each side of the tank.
  - This is best done using high-visibility spray paint.
  - Septic tanks should not be placed where they may be driven over by any cars, pick up trucks, or any large commercial vehicles.

## BUOYANCY CONTROL

What is “Buoyancy Control?”

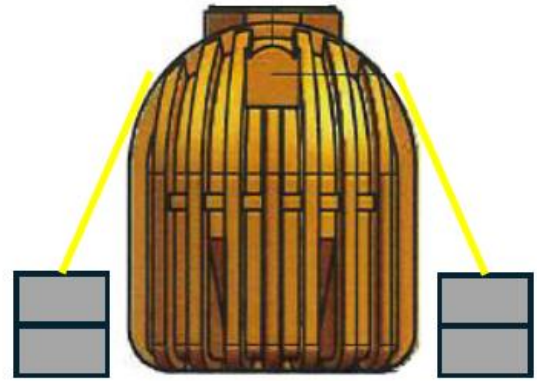
- If you have a high water table in your area, upward force can be applied to a buried septic tank no matter if it is concrete, fiberglass reinforced plastic, or rotomolded plastic.
- This upward pressure can actually push a tank out of the ground and severely damage your entire septic system.
- Generally speaking (not always!) . . .
  - Tanks buried with at least 12” of properly compacted top-fill do not require a restraint if the water table will not exceed 36” of the height of the tank.
  - If your water table is high and will impact the tank AND there is less than 12” of properly compacted top-fill, you may require a restraint system.
  - See details on page 3.
  - Different types of restraint system are:
    - Blocks & Straps
    - Restraining Collar
    - Helical Anchors



What you can (and should) do:

1. Have a site survey done by a certified geologist and do a soil test on the area where the system is going to be installed.
  - a. This includes not only the area where the tank will be placed but also the leaching area. Then the system can be designed based on the findings of the survey and results of the soil test.
2. Apply for the appropriate permits and approvals.
3. Order all appropriate required restraint supplies prior to the installation of the tank and/or call a professional septic tank installation company to do the job.

		Valencia Pipe Company 1000 Gallon Septic Tank Additional Weight Necessary (Pounds)				
Inches of Soil Cover On Top of Tank	Inches of Groundwater Above Base of Tank					
	6	12	18	24	30	
6		360	1890	3330	4860	
9			540	2070	3510	
12				720	2250	
15					900	
18						
21						
24						
27						
30						



Some Suggestions:

		Valencia Pipe Company 1500 Gallon Septic Tank Additional Weight Necessary (Pounds)				
Inches of Soil Cover On Top of Tank	Inches of Groundwater Above Base of Tank					
	6	12	18	24	30	
6		540	2700	4770	6840	
9			810	2880	5040	
12				1080	3150	
15					1260	
18						
21						
24						
27						
30						





Concrete Block



Concrete  
Parking Lot  
Bumper

\* - 90# used for calculation purposes.

 No additional weight or restraints necessary  
 Amount of extra weight / restraint necessary  
(In pounds)

**Installing an underground septic system is a labor- and time-intensive endeavor that requires some expertise.**  
**If you are unsure of any aspect of your septic tank installation, hire or consult with a qualified tank installer.**

## EXCAVATION & HOLE PREPARATION

- Call 811 before you dig. It is important to know the location(s) of various utility pipes, conduit, and cables.
- Excavate the tank area, allowing for 6"-12" of bedding and a minimum of 6" to a maximum of 30" top fill depending on local codes.
  - Allow for use of a manhole riser in the overall depth of the excavation (if you're going to use it).
  - Remove any roots.
  - Rake the bottom of the tank area and place a minimum of 6" of properly compacted sand in the bottom of the tank excavation. 12" for rocky soil.
    - Native material can be used instead of sand so long as it is flowable, compactable and rock free.
  - Make sure the bottom is level before placing the tank.



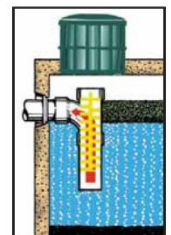
## PLACEMENT OF TANK

- Rig the tank for placement into the excavation and lower it into place.
- Ensure the inlet hole on the end of the tank is facing the home or building.
  - The inlet hole is higher than the outlet hole on the other side of the tank to ensure adequate effluent flow. Both are marked on the top area of the tank.
- Wiggle the tank around when placed into the excavation so it sits uniformly on the bottom with no gaps in the bottom support ribs.



## INSTALL THE SANITARY TEES

- Install the 4" gasket (provided) into the tank's outlet and inlet openings. Some people prefer to do this before lowering the tank into place.
  - Once installed on the wall(s) of the tank, lightly grease the gasket surface to facilitate sliding the 4" outlet and inlet pipes into the gasket.
  - Slide the end of the inlet pipe from the building into the gasket until the end of the pipe is underneath the manhole opening.
  - Repeat this process on the outlet side of the tank.
- Secure the white ABS sanitary tee on to the end of the drainpipe in the manhole cover area using PVC/ABS or ABS primer and cement (depending on the inlet/outlet pipe material).



The included bushing is required for SDR-35 pipe. You may or may not need it based on the size of the inlet/outlet pipe being used. Be sure to prime and cement the bushing in place before installation of the inlet and outlet pipes using ABS cement.



Tip: To ensure a good, tight fit when gluing the tee to the pipe, be sure to use primer and an adequate amount of cement. Place the tee on the pipe in a *horizontal* position, then immediately rotate it 90° to a *vertical* position (long end down). This will ensure good distribution of the solvent cement and a very tight connection!

- Using an outlet effluent filter?
  - Install it into the outlet sanitary tee at this time.
  - Make sure it is accessible from the manhole cover or riser.



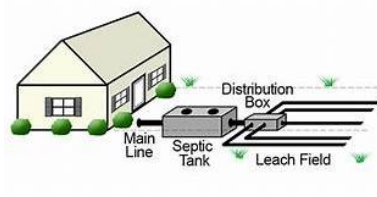
Tip: Contact your local inspector before moving to the burial process.

### FINAL STEPS (Riser Installation, Watertight Testing, Back-Filling)

- Some codes requires all tanks to be manufactured to accommodate installation of a watertight service access riser above one service access manhole. The riser must have a minimum nominal diameter of 20” when tank burial depths do not exceed 36 inches. Maximum burial level on a VPC septic tank is 30” as shown on the product label affixed to the tank.
- When using a manhole extension (riser), prepare and install it at this time in accordance with manufacturer’s guidelines.
  - Note: As manhole risers may not be necessary, they are not included with any septic tank and must be purchased separately. Please see options on page 7.
- Maximum burial level is 30” (top of the tank to grade level).
- If using a 2 compartment (2 manhole openings) septic tank, install the 20” (diameter) covers using tamper resistant screws if the lid/opening will be above grade.
- Leak testing:
  - Codes may require that a water test is to be performed by installing the tank, connecting inlet and outlet piping (with caps), installing risers as necessary, and filling with water two inches above the tank into the riser or tank lid area riser for 24 hours. The tank penetrations (inlet/outlet) must be visible. The water level is to be marked in the riser and observed for 24 hours. There may be no more than one-gallon leakage (that is, the water level drops below the riser or below the tank manhole opening area) over a 24 hour period. If the level has not dropped the tank passes.
  - Pneumatic (air) testing is also allowed and requires special equipment. Consult with an approved septic tank installation if you elect to use this method.

## Back-Filling

- *This is a very important step in the installation process. Please be sure to follow instructions carefully.*
- After a successful leak test, put 12" of water into the tank and then use 12" of clean back-fill starting with the ends of the tank first, then sides. Firmly compact the back-fill as you go. Make sure the bottom ribs of the tank are fully supported. Then add another 12" of water into the tank followed by the compacted back-fill process. Continue in this manner making sure you compact below the inlet and outlet pipe going in to and out of the tank.
- Once on the surface, ensure there is a slight mound over the tank so water flows away from the tank.
- Install the leach field in accordance with instructions and recommendations from the supplier(s) of the leach field parts as well as your local codes.



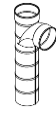











### Typical Riser Assembly:



**89-BUTYL**  
Use between parts  
where a watertight seal  
is needed.



## SEPTIC TANK PARTS & ACCESSORIES

<i>Model #</i>	<i>Description</i>	<i>Image</i>	<i>Model #</i>	<i>Description</i>	<i>Image</i>
89-TB4	4" Sanitary Tee with SDR 35 Bushing. Also acts as a filter housing (for 89-EF4)		89-EF4	4" Effluent Filter	
89-EF4COMBO	4" Baffle Sanitary Tee, Filter, SDR 35 bushing.		89-SPL4G	4" Inlet/Outlet Gasket for 4" Tee	
89-B4035	Sch 40 to SDR-35 Bushing		89-SD4	4" Outlet Tee Solids Deflector	
89-20RTT	20" Riser to Tank Adapter		89-20RISP	20" Riser 3" Green (safety pan)	
89-20RIS12	20" x 12" Manhole Extension (riser)		89-RISLGrn	20" Domed Lid	
89-20RIS6	20" x 6" Manhole Extension (riser)		89-BUTYL	3/8" x 20' Butyl Sealant Rope	

**INSTALLING AN UNDERGROUND SEPTIC SYSTEM IS A LABOR- AND TIME-INTENSIVE ENDEAVOR THAT REQUIRES SOME EXPERTISE.**

**IF YOU ARE UNSURE OF ANY ASPECT OF YOUR SEPTIC TANK INSTALLATION, IT IS STRONGLY SUGGESTED THAT YOU CONSULT WITH OR HIRE A QUALIFIED TANK INSTALLER.**



## Valencia Pipe Company Tank Warranty

VPC (Valencia Pipe Company) tanks have a three (3) year limited warranty from the date of manufacture. Date of manufacturer can be determined by accessing the serial number on the tank, most often near the manhole opening.

Should a defect appear within the warranty period VPC will supply a new, equivalent tank in replacement thereof. Or, at its discretion, VPC will repair the alleged defect on site if feasible. VPC's liability is limited to the value of the tank itself and specifically excludes the cost of installation and/or removal or consequential damages.

Tank(s) installed in an incorrect fashion will not be eligible for warranty. (For instance, installing a vertical tank underground (fully or partially); not following specific installation instructions for septic tanks, etc.).

Contact Valencia Pipe Company to obtain a return request authorization. **DO NOT** remove any tank from its current installation and **DO NOT** take any tank(s) back to Home Depot prior to receiving the return authorization.

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