

Bhagawati International Limited

Septic Tank

Advantages of FRP Septic tank:



Advantage #1

You will not need to dig as large a hole for a fiberglass septic tank as you will for a concrete septic tank. A fiberglass septic tank is complete when it's installed in the ground. Concrete will need a lid installed, and that will usually mean mortar all around the outside edges to ensure a good seal. The hole for a concrete septic tank must be large enough to accommodate the application of the mortar by a person. Digging a smaller hole means less backhoe digging time, less cover-up time, a faster installation, and saved dollars!

Advantage #2

Since a fiberglass septic tank is not porous, tree roots won't bore through the walls and into the tank. Fiberglass septic tanks are not totally immune to tree root damage, but the chances of such damage are dramatically reduced.

Advantage

#3

Fiberglass septic tanks are much, much easier and therefore less costly to install. A 4 KL fiberglass septic tank weighs between 157-180Kgs. These can be moved in a pickup truck. The backhoe can easily lift a fiberglass septic tank, and one man can shift it for perfect positioning. Moving and installing a 4 KL concrete septic tank requires special heavy equipment and more manpower. The lighter fiberglass septic tanks are also easier to reposition when they are placed in their holes. We shift them all around using a couple of 2" x 4" x 8' pieces of stud lumber. This is especially helpful when leveling properly.

Advantage #4

Fiberglass septic tanks are not damaged by prolonged exposure to sewerage and sewerage gasses.

Advantage #5

Easier connections can be made on fiberglass septic tanks. You don't need to mix mortar and stabilize in and out piping for fiberglass septic tanks. The in and out holes are cut much more precisely, and are about as simple to plumb as PVC drain lines. Also, unlike mortar connections, which require extended drying times, connections in and out of a fiberglass septic tank dry in minutes.

Advantage #6

A fiberglass septic tank is easier to repair. Patching fiberglass is a much simpler and less costly event than repairing concrete. When we have to do a concrete repair job, I call in my part time mason. To ensure a concrete patch is perfect, you need that kind of (costly) expertise. When we need to repair a fiberglass septic tank, we just use fiberglass repair kits from the local marina or [auto parts](#) store. We've never had one fail yet.

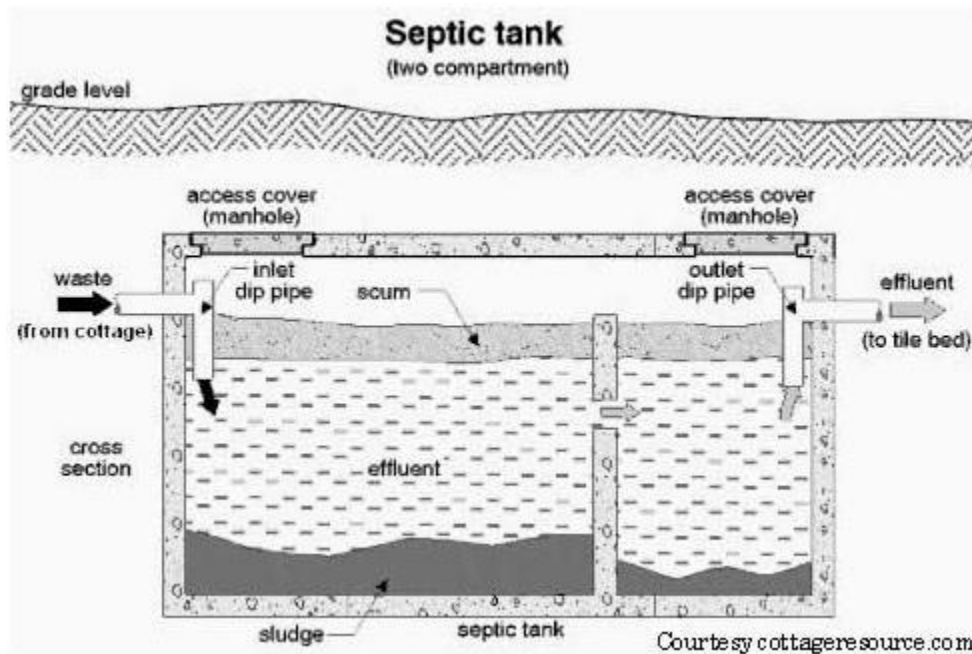
Advantage #7

Since a fiberglass septic tank weighs so much less, it can be installed in many more locations. This is a tremendous advantage if you live in a hilly or mountainous area like I do. You can get your fiberglass septic tank installed where you want it, not just where the large, heavy truck can get in and drop it off.

Summary :-

There are many advantages to installing a fiberglass septic tank. Whether you're the land owner or the installer, fiberglass is the premium choice for easy installation, longevity and incident-free service life. Also, the advantages of a fiberglass septic tank always add up to saved dollars now and later. I always recommend installing a fiberglass septic tank and you should always insist on having one installed.

Septic Tank Design:-



There are many different septic tank designs and although they may look different or be different shapes and sizes they all work basically the same way. Below you will see a picture of the basic internal design of a septic tank.

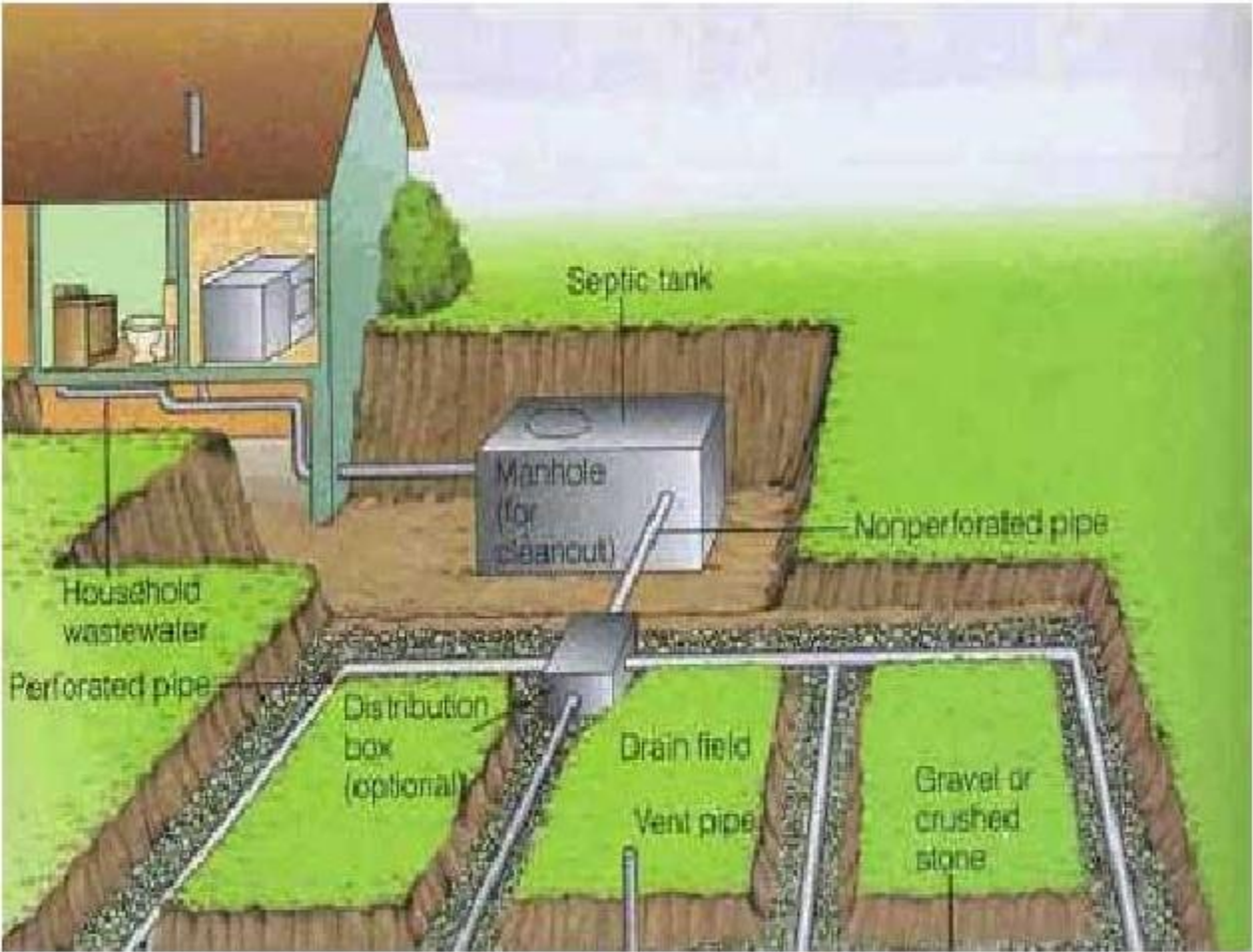
Compartment Septic Tank

The effluent comes in through the pipe on the left and is deposited into the main chamber of the septic tank. If the solids are denser than water they will fall straight to the bottom of the tank and the less dense solids and the greases will float at the surface. The solids that sink to the bottom right away are digested by bacteria and the same goes for the solids that float on top. Bacteria can digest most of the organic matter in human effluent but they cannot digest all of it. The materials that they cannot digest settle to the bottom of the septic tank and we call this material sludge. It is the sludge that is pumped during routine septic tank maintenance. Grease and other insoluble materials will stay afloat on the surface of the tank. The water in the tank is not pure water, it is called gray water because it still contains organic materials that need to be filtered out. As more water enters the effluent pipe coming from your house the water level inside the septic tank rises and gray water will exit through the sewage pipe on the right and head towards the drainage field.

There are generally three access ports at the top of the septic tank. The access port in the middle is what a septic pumping service would open when they are going to pump out the septic tank.

The other two ports are located directly above the incoming pipe and the outgoing pipe. They provide easy access in case one of the pipes is blocked or clogged. Your septic tank may also have two different compartments. It is designed this way so that the sludge remains predominantly on one side of the tank so that it does not make its way into the sewage pipe that goes the drainage field. If the sludge builds up high enough so that it does enter the drainage tube and goes the drainage field, you are going to have some major septic tank problems in the near future.

Below you will see a schematic of FRP septic tank and a drainage field.



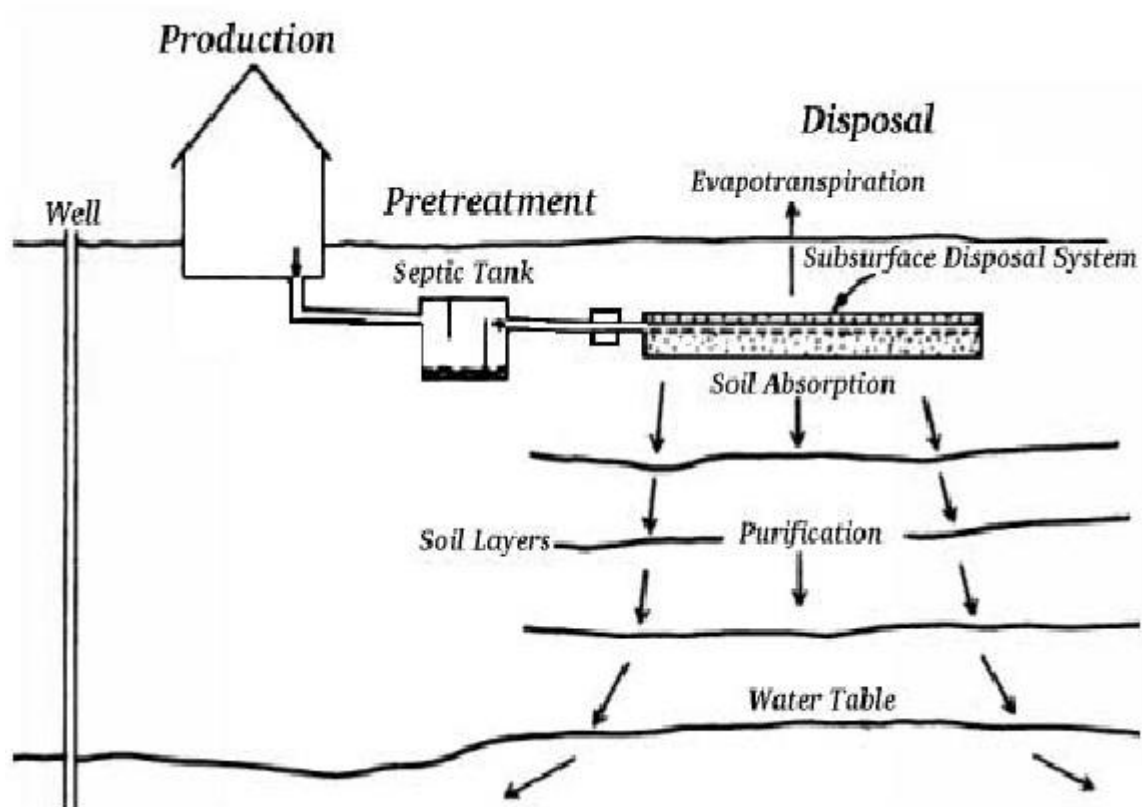
Septic System & Drain Field

As you can see in the diagram, the tube that leaves the septic tank goes to a pipe system which is called the drainage field. The pipe system is perforated to allow the gray water to exit and it exits into a specifically created soil bed of crushed rock and other ingredients. If the sludge from the septic tank makes its way into the drainage field it can clog these perforated tubes and end up causing major damage. This can lead to septic system failure which is something that you definitely want to avoid.

In the diagram below you will see what happens to the water when it leaves the drainage field.

Septic Tank Greywater Filter

The gray water that leaves the perforated tubing in the drainage field either goes up to the surface in small amounts and is evaporated or filters its way through the ground. As the water makes its way through the ground it becomes more and more clean and by the time it reaches the groundwater it is once again drinkable. You will notice in the diagram that there is a well and that is where the filtered water will end up. Anyone who lives on a well should have their water tested regularly for bacteria because if there is bacteria in the water that means your septic system is failing. If you discover that your septic system is failing you need to address the problem immediately.



There are other septic tank designs, most notably an aerator septic tank. The design of the aerator septic tank is basically the same as a traditional septic tank. The major difference is that there is a mechanism that introduces air into the gray water inside the septic tank. This allows for aerobic bacteria to digest the human effluent rather than anaerobic bacteria that are found in traditional septic tanks. The reason this is important is because aerobic bacteria work a lot faster than anaerobic bacteria. See the diagram below for an example of a basic aerobic septic system design.

Bhagawati International Limited
Address: A27B, Sector-16, NOIDA, (U.P.)-201301, INDIA
Phone:- +91-120-4749901, 9891388782