

PLUMBING

Our team of architects takes you through the different types of septic tanks and how one can have the best choice

How to build the right septic tank for your home

BY BRIAN MAYANJA

Last month, Kampala Capital City Authority inspected Rubaga division. In areas of Ndeeba, Kibuye, Kabowa and Najjanakumbi, some homes and primary schools were engulfed in a foul smell that welcomed guests at the main gates.

"You would find a clean compound, but the area engulfed in a nasty smell. We moved around to find out the source of the smell and discovered that the septic tanks were filled up," one of the health inspectors said of one of the schools.

Septic tanks are built underground to collect waste generated from the bedrooms, kitchens and toilets.

Many homeowners hire unprofessional plumbers, who construct septic tanks without considering many important factors and then they are stuck with a lifetime hassle of solving plumbing problems.

However, Gabriel Kasumba, the president of the Uganda National Plumbers' Association, explains that before constructing a septic tank, one has to know the number of people it will serve.

"The majority of unprofessional plumbers think latrines and septic tanks should be of the same size, but this is wrong," Kasumba states.

The difference between a latrine and septic tank, Kasumba says, is that the latrine is a dumping place for faeces and is home to maggots, while the latter is a treatment plant, with bacteria.

Kasumba says for six people, the length of the septic tank must be 1.8m and depth is 0.9 meters. For 10 people, Kasumba says the length should be 2.2m, while depth should be 0.9m.

Types of septic tanks



EXPERT ADVICE

Gabriel Kasumba

Allan Kalumba, a plumber, emphasises the importance of hiring professional plumbers, stating that they are able to tell you whether the area is suitable for septic tanks. This is because rocky areas and swampy ones require different types of septic tanks.

According to Gabriel Kasumba, well-planned septic tanks, can last between 30 and 40 years. At this point, the owner might have to empty the tank.

Concrete tanks are the most common type constructed in Uganda. A concrete tank can hold between 30,000 litres and 60,000 litres of waste.

Allan Kalumba, a plumber, lists the required materials for septic tank construction as sand, cement, stones, iron bars and bricks.

When using this type, it is advisable to use air-tight covers to block the smell

from wafting out.

But Kalumba adds that proper ventilation is needed in the toilet facilities, to release bad odour.

Plastic tanks

Kasumba says plastic septic tanks are cheaper than the concrete ones. He adds that this type of tank is placed inside the pit. No matter how limited the space one has, a plastic septic tank can fit there.

"Another advantage is that you can move with it if you are moving house," Kasumba adds.

Small population

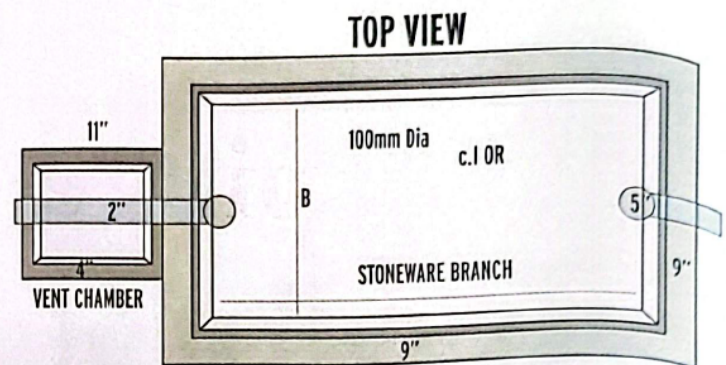
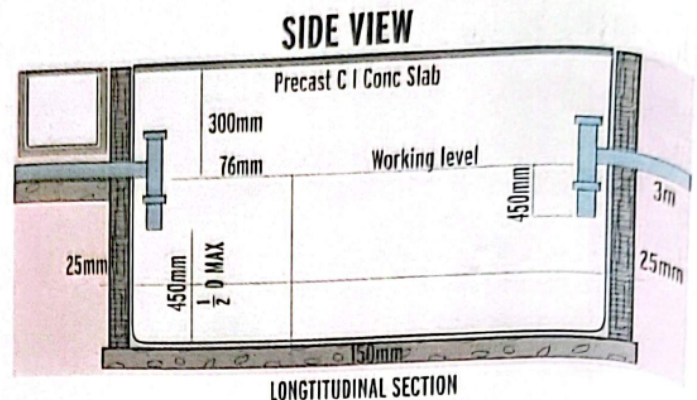
In most cases, some plumbers build septic tanks which are bigger than what the number of people at home requires.

In this case, Kasumba says the anaerobic bacteria destroys the walls of the tanks.

"This is because bacteria multiplies faster in large septic tanks. And if they fail to get what to eat, the bacteria embarks on destroying the wall," he explains. Anaerobic bacteria depend on the waste for their survival.

Kasumba cautions against pouring soapy water into the tanks because it kills the bacteria.

"For the bacteria to live longer, they need fresh water from the toilets. When



HORIZONTAL SECTION

No. of Users	DIMENSIONS			PERCOLATION TRENCH LENGTH	Key
	L	B	D	M. RUM	
6	1.8m	.61m	.9m	7.3	L - Length B - Width D - Depth M. RUM Amount of stones needed when constructing in swampy area
10	2.2m	.61m	.9m	12.2	
15	2.4m	.61m	.9m	16.3	
20	2.8m	.61m	.9m	24.4	
25	3.4m	.61m	.9m	30.5	
30	2.4m	.91m	.92m	36.6	

you flush the toilets, the fresh water goes into the septic tanks. The bacteria are also able to decompose the waste into small pieces," Kasumba says.

Costs

It might be hard to determine the cost of constructing septic tanks. Kasumba says the costs depend on the size one wants, the topography of the area and the materials used.



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