

Septic Tank and Sludge Management Reservoir

Operation and Maintenance Guide

Premier Tech Aqua (PTA) congratulates you for your purchase. By making this choice you contribute to the protection of the environment and the water sources of your community.

*This guide contains the necessary information regarding the operation, usage and maintenance of **Septic Tanks and Sludge Management Reservoirs**. For more information, please do not hesitate to contact our Customer Service at 1 800 632-6356 or visit us at **PREMIERTECHAQUA.COM**.*

Table of contents

1	Operation	1
2	Maintenance and Servicing	2
3	Start-Up and Seasonal Shutdown	2
4	Troubleshooting	3

1 Operation

1.1 Model

Septic tanks and sludge management reservoirs are offered in various models and materials, including concrete, fibreglass and polyethylene. Premier Tech Aqua tanks and reservoirs are made of polyethylene and are offered in different models. They range from a PST-960 tank to larger capacity tanks (PST-1500 to PST-5000). For more information about the various models and capacities of your septic tanks and/or sludge management reservoirs, please consult the « Data Sheet » inside this manual.

1.2 Functioning

The purpose of septic tanks and sludge management reservoirs is to settle and store sludge before it can be disposed of by regular pump outs.

Inside the septic tank, the primary type of sludge originating from the raw sewage is settled. The retention time inside the septic tank provides a minimal amount of time sufficient for the liquid-solid separation to occur, as required by the regulation.

When a sludge management reservoir is integrated in a treatment chain, its purpose is to allow the settling and accumulation of secondary sludge produced by the biological treatment. The secondary clarifier, which separates the biological sludge of the treatment chain, then pumps it directly into the sludge management reservoir. The supernatant of this reservoir is directed toward the beginning of the treatment chain, the septic tank.

2 Maintenance and Servicing

A septic tank must be inspected regularly (measurement of sludge and scum levels) and pumped out when required. The design of the treatment chain serves as a tool to assess the autonomy of the septic tank on a theoretical basis. However, this autonomy must be validated under real conditions. Various factors, inherent to the specific operation conditions of an installation can influence the production of primary sludge, making it difficult to evaluate theoretical designs with precision.

The sludge management reservoir must also be inspected periodically (measurement of sludge and scum levels) and pumped out when required. The design of the treatment chain serves as a tool to assess the autonomy of the septic tank on a theoretical basis. However, this autonomy must be validated under real conditions. Various factors, inherent to the specific operation conditions of an installation can influence the production of secondary sludge, making it difficult to evaluate theoretical designs with precision. In certain cases, the sludge from the secondary treatment is returned to the septic tank. In those cases, the septic tank is oversized so it can receive the sludge produced by the secondary treatment.

A regular follow-up of sludge levels in each of these reservoirs must be ensured to evaluate the frequency of sludge pump outs under real conditions.

2.1 Monthly Maintenance

2.1.1 Inspection and sludge level measurement

- If the primary treatment is a septic tank, measure the sludge and scum levels and make sure the septic tank is pumped out when required. Please refer to the local regulation for maximum levels at which the tank must be pumped out.
- If a secondary sludge reservoir is integrated, measure the height of the sludge and scum and make sure the septic tank is pumped out when required. Please refer to your local regulation for maximal levels at which the reservoir must be pumped out.
- It is good practice to verify if there is an accumulation of sludge and scum in the equalization tank, to have it pumped out when required or anytime a preceding reservoir is being pumped out.

3 Start-Up and Seasonal Shutdown

No specific action is required on the system, either at start-up or for a seasonal shutdown.

For seasonal shutdowns where frost is to be expected, it is not recommended to empty reservoirs. The water level can be lowered below the inlet and outlet descending pipes to prevent frost damage. When an effluent filter is installed, we recommend removing the filtering cartridge during the shutdown period.

For summer shutdowns or when the weather is warmer, it may be preferable to empty reservoirs to avoid the generation of foul odours during the shutdown period.

4 Troubleshooting

4.1 Increase in the Level of the Septic Tank

Possible Causes	Explanations and Repairs
The effluent filter of the septic tank is blocked	Using protective gloves, open the septic tank. To remove the effluent filter, pull on the cartridge. Clean the cartridge. Make sure you place the effluent filter back properly.
The conduits are obstructed	Check if anything is obstructing the conduits. Clean if necessary.
The daily flow is greater than the design flow	If the daily flow is greater than the design flow, the operation times of the pumps will need to be adjusted to meet the system's demands, without being fed on a continuous basis. To ensure an efficient treatment, it is essential that the treatment chain be set on dose feed mode; not in continuous feed.

4.2 High TSS Concentrations at the Outlet of the Septic Tank

Possible Causes	Explanations and Repairs
High sludge level in the septic tank	- If TSS concentrations are high at the outlet of the septic tank, the tank may need to be pumped out. - If this is a recurring problem, it is possible that the septic tank is undersized and that solid particles do not have enough time as expected to settle in the septic tank.

For any issue, question or comments, please do not hesitate to contact Premier Tech Aqua at 1 800 632-6356.



 **1 800 632-6356**
 **418 862-6642**
pta@premiertech.com
PREMIERTECHAQUA.COM

The information contained in this document is based upon the latest information available at the time of publication and is designed to provide you with a general introduction to our products. We make no warranties or representations as to its accuracy. We are continually updating and improving our products and reserve the right to amend, discontinue, alter or change specifications and prices without prior notice.

© Premier Tech Ltd, 2019