

## EFFLUENT FILTERS



### WHAT IS AN EFFLUENT FILTER?

An effluent filter is an accessory to the septic tank, installed at its exit. Required or strongly recommended in most Canadian provinces for all precast septic tanks, the effluent filter is an improvement on the treatment chain. Although its introduction brings many advantages, in particular on the longevity of the septic installation, it also introduces some constraints that the designer, installer and owner of an installation must be aware of.

### WHAT IS ITS ROLE?

The primary role of an effluent filter is to retain certain particles in the septic tank. Although the latter has deflectors, some suspended solids are always present in the effluent, whether it is because of insufficient settling time, of the suspended particles caused by the deterioration of the foam, or through the action of the generated gasses. Its role consists in reducing the effluent's organic load as it moves toward the treatment unit, such as a System O® solution.

## HOW TO CHOOSE THE RIGHT EFFLUENT FILTER

The shape of the filter varies from one manufacturer to another. It must comply with the NSF-46 standard to be installed in a certified septic tank. However, this standard is mostly about the filter's capacity to retain particles of a specific diameter (two categories: 1.5- and 3-mm diameter). The standard does not address the passage of air through the effluent filter.

Air in the leach field is essential to the biological process that best treats wastewater. System O)) solutions are designed to increase the air quantity through ventilation between the vent at the end of the leach field and the plumbing vent at the top of the serviced building.

As this ventilation circuit includes the septic tank, the air must also travel through the effluent filter. This is why designers and installers should choose a septic tank equipped with an effluent filter that allows the passage of air. Otherwise, the obstruction of the ventilation circuit would be harmful not only to the adequate ventilation of gasses generated by the fermentation process, which could cause odours, but will also negatively affect the performance of the System O)) installation because of a lack of oxygen.

So, when choosing an effluent filter, it is very important to look at its capacity to allow the passage of air.

## THE IMPORTANCE OF CLEANING AN EFFLUENT FILTER

As the effluent filter retains particles, these start to gradual hamper the passage of water towards the exit. The accumulation of solids and the microbial development at the surface of the filter becomes so important that it can clog completely, which could have several consequences.



First, a clogged effluent filter will stop water from leaving the septic tank from its intended exit. This will make the water level rise inside the tank. If this situation continues, the water level could rise sufficiently for the fat, oil and grease that float on top of the water level and some suspended solids to flow over the effluent filter to reach the treatment unit.

This situation must obviously be prevented as, with time, the organic overload and presence of difficult-to-degrade elements can have a harmful effect on the treatment unit.

A clogged effluent filter can also lead to other consequences, this time on the ventilation circuit. As explained above, good ventilation is key to effective evacuation of fermentation gasses and the optimal biological treatment inside a System O)) installation. A clogged effluent filter could sufficiently stop the passage of air and have significant impacts on the treatment. On top of that, by stopping the passage of air, fermentation gasses have a tendency to leave the system by the field vent because it can reach the plumbing vent. This means that odours could be noticed near the system.

To avoid these situations and ensure peace of mind, the effluent filter should be cleaned twice a year.

## CONCLUSION

In conclusion, the effluent filter is a simple and effective accessory that reduces the organic load of the effluent and helps the treatment downstream. Its disadvantage is in the obligation to clean them out twice a year, which many owners don't do, or don't know it is required. It is crucial to inform them about the importance of cleaning their effluent filter so they can benefit from an efficient septic installation, without odours, for many, many years!