



Ontario User Guide

System O))

Province of Ontario

BMEC Authorization #: 23-05-407
#: 24-06-408
CAN/BNQ 3680-600

May 2023



Make-Way Environmental Technologies Inc.

Important Security instructions



It is extremely dangerous even potentially deadly to open a septic tank, pump station or any enclosed space that is part of a wastewater treatment system. This work must be done by a person trained in enclosed space working and rescue procedures who has the necessary equipment.

The action of the bacteria on the organic matter present in the wastewater produces gases such as carbon gas (CO₂), methane gas (CH₄) and sulphuric hydrogen (H₂S). The H₂S present in the septic tank or a pump station can cause the death of an individual in a matter of minutes. This is why this work must be left to competent personnel.



Pipes are buried near your septic installation. Please speak to your contractor or the technical service of Make-Way Environmental in order to take the necessary precautions before digging or undertaking excavation jobs near your septic system.



Please be sure that the covers of the septic tank, pump station, piezometers and sampling device are always in place and that they remain accessible at all times for periodic inspections and maintenance work when necessary. (i.e., emptying of the septic tank). The same applies for distribution boxes of systems built after 2009 as well as those which had an accessible distribution box before that time.

Warranty

DBO Expert Inc. offers owners of its System O)) wastewater treatment technology a warranty on the Advanced Enviro))Septic pipes that are at the heart of System O)). See Appendix B for the certificate.

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Introduction

Congratulations! You have chosen the System O)) for your septic installation. This system was developed to effectively treat wastewater from your home. However, certain instructions must be followed in order to maintain its treatment performance so that you can make use of it for many years.

We ask that you carefully read through this document and keep it in your files for future reference.

The Purpose of this Document

This user guide explains the proper use, procedures and inspections required in order to ensure the proper operation and longevity of a System O)) for residential wastewater treatment.

Please note that it is the owner's responsibility to ensure that the system is used properly and according to its treatment capacity. It is also your responsibility to respect the rules and regulations in effect, including the standards for discharge into the environment.

Your System O))

Designation of the System O))

Name: System O))

Class and Treatment Type: The System O)) meets the requirements for Level IV Quality Criteria in Ontario.

Application Domain: Residential Wastewater (sewage).

The system cannot be used to treat wastewater to make it drinkable. It treats residential wastewater to an acceptable level for it to be reintroduced into the environment according to applicable standards.

Definition of the System O))

The System O)) is a passive technology manufactured by DBO Expert that facilitates the growth of bacteria responsible for wastewater treatment. It is composed primarily of a septic tank, the rows of Advanced Enviro-Septic® pipe and a layer of system sand.

The System O)) must be preceded by a septic tank with an effluent filter and a wastewater distribution device. The treated wastewater infiltrates directly into the soil beneath the treatment system.

What to do if a problem occurs?

If in the course of normal use of your septic system you notice any of the following problems:

- presence of abnormal odor in the house, around the septic system or emanating from sources of drinking water,
- abnormally wet soil, presence of ponding or odours in the area of the septic tank or the System O)) area,
- slow flushing toilets or other plumbing in the home,
- presence of abnormally abundant vegetation on the surface or around the septic tank or the System O)) installation,
- flooding in the area where the System O)) is installed,
- erosion of the soil / top soil on or around the System O)),
- alarm from the pump station if such a device is part of your installation,

If you notice one of these problems, immediately contact your contractor first, then your inspection technician or the customer service of Make-Way Environmental Technologies Inc. 1-866-625-3929. Please have available the information from Appendix A – *Information Specific to Your Treatment System* – of the present guide.

Customer service and Technical Support Information

Please contact us if you need further information.

Telephone: 1-866-MAKE-WAY (625-3929) or (519) 709-0681

Fax: (519)235-0570

Email: itech@makeway.ca

Internet site: www.makeway.ca

System Tag

Each System O)) must be identified with a specific system tag or an information sheet. This tag, similar to the one shown in Figure 1, will be installed in the sampling device access port. The number shown at the bottom of the tag identifies your system.



<p>Note : Le système de traitement System O)) doit être précédé d'une fosse septique certifiée ou d'un traitement primaire adéquat / The System O)) wastewater treatment system must be preceded by a certified septic tank or an appropriate primary treatment.</p> 	<p>Distributeur autorisé au Canada / Canadian Authorized Distributor: DBO Expert inc. 1-866-440-4975</p>	
	<p>Distributeur en Ontario / Ontario Distributor: Makeway Environment inc. 1-866-Makeway (1-866-625-3929)</p>	
	<p>Modèle / Type: ESP-Ontario Conduites / Pipes: ESP-TS Canada</p>	
	<p>Fabriqué aux / Made in: États-Unis / USA</p>	
	<p>Par / by: Presby Environmental, Inc. 143 Airport Road, Whitefield, NH, 03598</p>	
	<p>Commission d'évaluation des matériaux de construction / Building Materials Evaluation Commission BMEC Authorization Number: A2005-18</p>	
	<p>Date d'installation / Installation date: <input type="text"/></p>	
	<p>Capacité hydraulique du système / Hydraulic Capacity of the system: <input type="text"/></p>	
	<p>Note : Le système de traitement Enviro-Septic doit être précédé d'une fosse septique certifiée ou d'un traitement primaire adéquat / The Enviro-Septic system must be preceded by a certified septic tank or an appropriate primary treatment.</p>	
	<p>No. de System / System number: <input type="text"/></p>	

Figure 1. System O)) tag

Certified Designers and Authorized Installers

The Province of Ontario requires that all designers and installers of septic systems must be certified by the Province. Designers and Installers of the System O)) must also be trained on System O)) products by the manufacturer or manufacturer's representative.

All System O)) installations must be done by an installer authorized by Make-Way Environmental Technologies Inc. (Make-Way is authorized by DBO Expert Inc to train and accredit installers). Authorization is obtained by attending a training session or by doing the first installation under supervision of Make-Way Environmental Technologies Inc.

System O)) Capacity

The capacity of your System O)) depends on the configuration designed and installed on site.

Initially, each Advanced Enviro-Septic® pipe has the capacity to treat 126 L of wastewater per day. Therefore, the formula to determine the basic design capacity of your System O)) is:

$$126 \times \text{Number of Advanced Enviro-Septic}^{\text{®}} \text{ pipes installed.}$$

This being said, for some configurations, the capacity of the underlying soil to infiltrate the treated wastewater may be lower than the capacity of the pipes installed. Therefore, it is important to verify with the designer the actual capacity.

That design capacity will also appear on the system tag.

Residential Wastewater

Your system was design to treat domestic wastewater. Table 1 indicates the normal characteristics of raw domestic sewage. The water entering the System O)) needs to be within the range of the parameters shown for the septic tank effluent.

Table 1. Residential wastewater parameter

Parameters	Units	Raw Sewage	Septic Tank Effluent
TSS	mg/L	237-600	50-90
CBOD ₅	mg/L	210-530	140-200

Reference : Tchobanoglous and Burton (1991)

Warranty Certificate

System O)) pipes comes with a limited warranty. The warranty details are presented in Appendix B.

How does the System O)) works?

The System O)) is a passive technology which facilitates the proliferation of the bacteria responsible for wastewater treatment. It is comprised mainly of a septic tank, the rows of Advanced Enviro-Septic[®] pipes and a layer of system sand.

The System O)) must be preceded by a septic tank with an effluent filter and a distribution box (or another method of distribution).

The system must be installed according to the Ontario Design and Installation Manual and in accordance with the Building Materials Evaluation Commission (BMEC) Authorization and Part 8 of the Ontario Building Code (OBC).

Treatment Process of the System O))

The rows of Advanced Enviro-Septic[®] pipe and system sand permit the treatment and distribution of wastewater on the surface of the receiving soil.

The pipes support, first of all, the separation of particles through flotation and decantation. The wastewater is then dispersed through perforations situated all around the pipes and through the pores of the two layers of synthetic media covering the pipes. These membranes facilitate the fixation of the microbic cultures which support wastewater treatment as well as longitudinal distribution.

The layer of sand continues the treatment process and helps in dispersing the water before it infiltrates into the natural soil. In this way, the System O)) integrates both functions of treatment and infiltration into the native soil.

**System O))
Chain of
Treatment**

There are six (6) main components in the System O)) chain of treatment. They are:

- Septic Tank
- Effluent filter
- Distribution device
- Advanced Enviro-Septic® pipe
- Sample Device and
- System O)) sand.

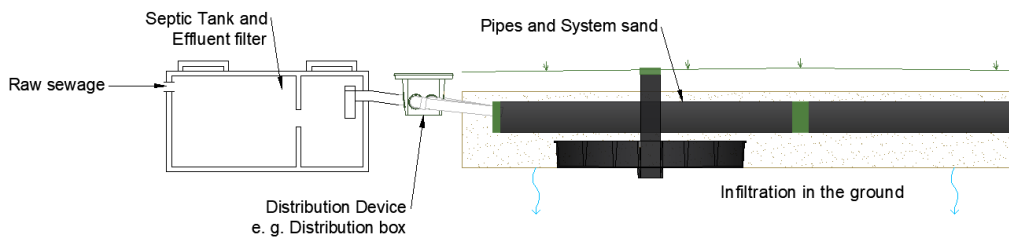


Figure 2. System O)) chain of treatment

**Diagram of the
System O))**

The following diagram presents the System O))

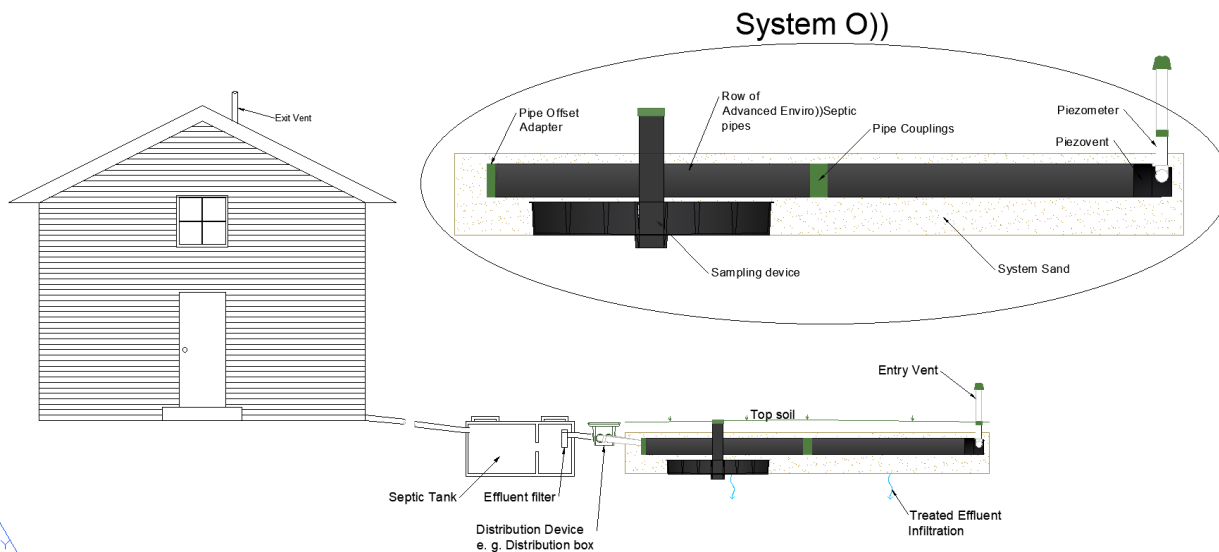


Figure 3. Diagram of the System O))

System O)) Components

Your septic system includes several components. All these components are parts of the treatment and monitoring process of your installation. Table 2 presents the list of these components.

The table also presents a summary of inspections required for each component. More detailed information on this subject is presented in the sections Maintenance Manual.

Table 2. Components of the System O))

Component	Function	Steps to follow	Frequency	Responsibility
Septic Tank	Primary sewage treatment	Periodic emptying	2-4 years depending on use	Owner (the work must be done by a qualified person)
Effluent filter	Retention of solids too large for the maximum opening of the filter.	Clean with a garden hose	Twice a year	Owner
Distribution system Distribution box and Equalizers™ Low pressure distribution system (LPDS or Nested pipes)	Distribute the water from the septic tank to the rows of Advanced Enviro-Septic® pipes.	According to the level of water in the piezometers.	As needed	Qualified personnel
Rows of Advanced Enviro-Septic® pipes	Distribute and treat wastewater	See piezometers		
Piezometers	Indicate the water level in the pipes	Measures water level	Once or twice a year and as a preventative, before emptying the septic tank.	Qualified personnel
Sampling device	Verify the treatment performance of the System O))	See sampling procedure section	Prior to each sampling	Qualified personnel
Sampling	Verify the treatment performance of the System O))	See sampling procedure section	According to BMEC Authorization	Qualified personnel
Vent	Allows air passage through the System O))	Verify that the opening is not obstructed	During annual inspection	Qualified personnel
System sand	Completes the treatment of the water and encourages its infiltration.	N/A	N/A	N/A
Pump station (if provided)	Lifts the wastewater up to the System O))	According to specifications and maintenance plan issued by system designer		

Configuration of System O))

Depending on multiple criteria, System O)) can come in different configurations and with different of distribution devices.

Gravity-fed

A System O)) without any pump chamber is a system working entirely by gravity. This type of system uses a distribution box to evenly distribute supply the wastewater between each row of the System O)).

Pumped

The presence of a pump chamber can result in three different distribution devices:

1. Pumped in a Distribution box. This works the exact same way as a gravity-fed system, but the effluent coming out of the septic tank had to be lifted to the System O))
2. Low-pressure distribution system (LPDS): Like when the water is pumped in a Distribution Box, but the LPDS completely replaces the box. Each row has an injector that achieves a low-pressure distribution of the water.
3. Nested pipes: Like an LPDS, but the water is supplied throughout the entire length of the System O)) instead of at the beginning of each row like a Distribution box and a LPDS do.

Depending on the type of distribution device, some components will be visible from the ground such as the 510 mm (20 inches) distribution box cover and the 100 mm (4 inches) LPDS caps.



Figure 4. Left: Distribution box cover, Right: LPDS cap

Operating the System O))

Initial Use

If a pump station is used, the installer will verify that it is functioning properly at the time of installation. The homeowner must make sure that there is adequate electricity to safely operate the equipment as well as the alarm component.

Usage Directions

Following the installation of your System O)) by the installer and inspected by the Regulatory Authorities your system is now ready for use.

As with any septic system, attention should be paid to the nature of the wastewater to be treated. It is important that the users of the system follow the direction presented in the Owner's Manual. It provides a detailed list of things to do or not to do in and around the residence or building being served by the system. Not following the directions may lead to clogging or premature aging of the system. If this happens, actions can be taken to regenerate the biomat or to replace certain components if damage warrants it.

Intermittent Use or Prolonged Absences

The System O)) is a passive wastewater treatment system. When properly installed, it requires no particular attention for intermittent use or in the case of prolonged absence.

System O)) Operating Instructions

The use and the maintenance of a System O)) are relatively simple. In the sections below you will find the basic rules to follow to ensure the proper operation of your System O)). Adhering to these rules is essential to the correct operation of any septic system.

To simplify understanding, these rules are presented to you as things to do or not to do, in each part of the house and outside around the house.

Wastewater Volume

The discharge of large quantities of wastewater discharge from the house into the System O)) in a short period of time could have a negative impact on the effectiveness of the treatment and the infiltration of wastewater into the native soil. Large quantities of wastewater can cause agitation in the septic tank. A certain quantity of sludge or scum is susceptible to be put into suspension and be brought into the System and the infiltration bed. The frequency of such an event must be minimized.

You must ensure that the volume of wastewater entering the System O)) is reasonable when compared to the total daily flow the system was designed for.

After the installation, if changes are made to the residence (i.e., addition of a bedroom)¹, please contact the designer of the System O)). Make sure that the septic system is inspected by a qualified person to determine that it has the necessary capacity to treat and infiltrate the new daily design flow of wastewater being generated.

**In the
Bathroom**

Do:

- immediately repair any leaking faucet or toilet,
- use a reasonable quantity of toilet paper.

Do not:

- use disinfectant in tablet (puck) form, whether it is placed in the basin or the tank,
 - throw cigarettes, cigarette butts or medication in the toilet,
 - throw paper towels, paper napkins or other personal hygiene products in the toilet.
-

In the Kitchen

Do:

- repair any leaking faucet,
- use dish soap or dishwasher soap that is low in phosphate (0 to 5%),
- use the necessary quantity of soap to do the work. Take note that the necessary quantity is often less than suggested by the manufacturer,

Do not:

- use a food waste disposal unit (garburator) in your sink that is connected to your home plumbing / septic system,
 - dispose of vegetables, meats, fat, oil, coffee beans, citrus products or other unassimilated products into the septic system.
-

**For the
Laundry**

Do:

- use phosphate free detergent, preferably in liquid form. If it is not possible, use biodegradable powder detergent,
 - use the necessary quantity of soap to do the work. Take note that the necessary quantity is often less than that suggested by the manufacturer,
 - minimize, when possible, the volume of water used for the laundry according to the quantity of clothing to wash,
 - If possible, spread your loads of laundry throughout the week.
-

¹ Adding a bedroom, a business at home, a reception room, conversion of the house to a bed and breakfast, etc.

**Elsewhere in
and Around the
House**

Do:

- divert drainage and rain water away from the surface of the System O)).

Do not:

- discharge water softener or other water treatment equipment backwash into your septic system,
 - discharge any water from swimming pool filters, spas or other appliance that discharge chlorinated water into your septic system,
 - let water from sump pumps, roof drains (gutters) and drainage pipes discharge into the septic system,
 - dispose of solvents, paints, antifreeze, engine oil floor waxes, carpet cleaners, drain cleaner or other toxic or flammable products in the septic installation. This includes water used to wash brushes or rollers that were used with latex paint (latex paint contains elements that are harmful to septic system),
 - Dispose of animal litter, tea bags, coffee grounds, egg shells, cigarette butts, paper towels, condoms, diapers or sanitary napkins in the septic system,
 - Discharge large quantities of anti-bacterial and disinfectant products.
-

**Chemicals for
Septic
Installation**

Your System O)) does not require any starting chemical, cleaning or other additives. The bacteria that carry out the treatment are naturally present in raw domestic sewage. Any chemicals or additives added to the System O)) could possibly kill these bacteria.

Aeration

It is very important to ensure good aeration occurs so that the septic system functions correctly. The vent(s) installed at the ends of the septic system encourages this aeration. It is important to make sure that the opening is not blocked and that air can circulate freely at all times. Air enters through the vent, circulates through the rows of pipes and the septic tank and travels through the plumbing of the house to exit through the roof vent / stack.

When a pump station is used, a bypass pipe or an extra vent must be used to ensure proper ventilation of the system.

Heavy Machinery and Motorized Vehicle Traffic

Heavy machinery or equipment must never be driven on a septic system, whether it is before, during or after its construction. This includes any motorized vehicle. The effectiveness of the drainage in the ground depends on the presence of a non-compacted natural soil that is unsaturated with water. Heavy machinery or motorized vehicle traffic² on the soil closes the natural pores of the soil which reduces its permeability and allows for ponding and the accumulation of surface water.

Vegetation

The surface of the septic system must be planted with grass. The grass must be cut regularly in order to encourage growth without the use of fertilizers. Vegetation cover contributes to the elimination of nitrogen and phosphorus.

It is important not to plant trees or other plants with invasive roots, or install a Lawn Sprinkler System, within the proximity of the septic installation (minimum distance 2 meters). Do not construct any sort of deck, patio, gazebo, or other structure or surface over your system.

² The Advanced Enviro-Septic® pipes installed according to manufacturer's recommendations can withstand the weight of a vehicle not exceeding the standard H10, if such a vehicle were to move above the treatment system. The occasional passage of a light vehicle such as a lawn tractor is acceptable.

System O)) Maintenance

Septic Tank Maintenance

The septic tank must be pumped out on a regular basis. Generally, it should be pumped out every two years for residential use or every three to five years for seasonal applications. For more information on septic tank maintenance please discuss with your septic system designer or your local sewage pumper.

If the septic tank is not pumped regularly, an increasingly large amount of solids and grease in suspension will flow from the septic tank and end up in the treatment system. The septic tank will no longer function properly and in time the performance of the System O)) will be affected. This is why periodic emptying of the septic tank is necessary.

The liquids and solids will be removed when pumping out the septic tank. The septic tank is then filled with water.

At all times, a professional using the proper equipment must carry out the pumping out of a septic tank.

The Owner is responsible to ensure their septic tank is pumped out. This work should always be done by a qualified person since it can be very dangerous to open a septic system without first taking the necessary precautions.

Note: It is the homeowner's responsibility to make sure that at all times the septic tank lids are in their proper position and securely fastened. A lid that is not installed correctly can be harmful to the operation of the System O)). Moreover, entering a septic tank can be very dangerous. Only a qualified person may perform this work.

Septic Tank Effluent Filter

The effluent filter is a device installed at the exit of the septic tank. It is mandatory for all septic tanks.

The effluent filter must be cleaned by using a garden hose twice a year by the owner. Here is how to do it:

1. Open both covers of the septic tank.
2. In the second cover, you should see an effluent filter.
3. Pull out the effluent filter.

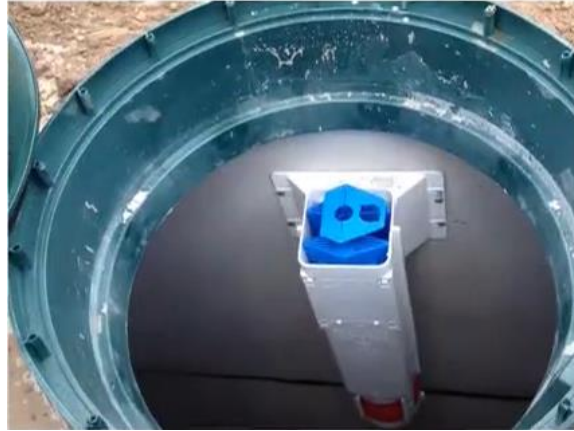


Figure 5. Septic tank effluent filter

4. Stand over the first compartment of the septic tank and rinse the filter with a garden hose. This make sure that any debris stuck in the effluent filter will fall into the first compartment and be decanted just like any other debris coming from the house.
5. Place back the filter in the septic tank. Make sure the arrow on the filter points toward the exist of the septic tank.



Figure 6. Arrow on the effluent filter

6. Put back both covers and secure them back into place.

Distribution Device

During normal use of your septic system the distribution device should not need adjustment.

If an adjustment needs to be made, please contact Make-Way Environmental who are qualified to carry out the adjustment(s).

Distribution Box

The initial levelling during installation and the self-levelling capability of the flow equalizers are generally enough to maintain an equal distribution of wastewater among the rows of Advanced Enviro-Septic® pipe.

LPDS or Nested pipes

These low-pressure devices are made of large enough openings to prevent clogging.

Advanced Enviro-Septic® Pipe Rows

Under normal use, the rows of Advanced Enviro-Septic® pipe do not require maintenance. It is normal to find fluctuation of the wastewater level in the pipes. On the other hand, if the wastewater level(s) reaches 230 mm, a rejuvenation of the System O)) must be considered. A qualified person³ must carry out this procedure.

If desired, the measurements can be done by the owner by following this procedure:

Warning: Water present in the piezometers is wastewater. It is important to take the necessary precautions while taking the water level measurements. The person taking the measurement must wear protective gloves. The use of disposable protective gloves is recommended. In order to avoid possible contamination, avoid direct contact with wastewater.

Water level measuring sequence:

1. Remove the cap from the piezometer to be measured.
2. Insert a wooden stick or a meter stick (measuring instrument) into the piezometer so that it comes in contact with the water that can be present in the bottom of the piezometer. Normally, a wooden stick of one meter in length will be sufficient. If on the other hand your piezometers are longer, use a longer wood stick. A string attached to the wooden stick can also be used in this case to lower and lift your measuring instrument in the piezometer.
3. By using a meter stick, determine the water level in the pipe by observing the height of the wet area. If the reading proves to be difficult, add some fine sand on the wet area before lowering it in the piezometer. Most of the sand will be removed from the area that will have soaked in water and the reading will be easier.
4. Note the water level of the piezometer.
5. Replace the cap on the piezometer
6. Dry the wet area on the wooden stick or meter stick using disposable rags.
7. Repeat all the steps for each piezometer.

³ There may be costs related to this operation, if the problem is due to improper use of the system or due to a design or installation problem.

8. Clean the meter stick, the wooden stick or the gloves if they are reusable. Place the disposable gloves and rags in a plastic bag and properly secure the bag.

Record the results obtained in the table provided with your inspection agreement.

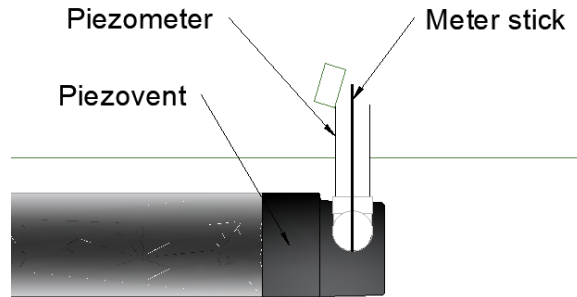


Figure 7. Measuring the level of water in a piezometer

Sampling Device

The System O)) has a sampling device. The sampling port is closed off by a cap and must be accessible above ground. It is normally located beside the rows of pipes, near the front end and is fed by wastewater from the septic tank (see Figure 8 and Figure 9).

The Owner must make sure that the sample port is always capped. It will be used by an inspection technician to analyze the performance of the System O)) according to the code requirements.

System O)) Components Installed in Ground

The figure below shows what the system looks like in ground. This example has a distribution box as its distribution device.

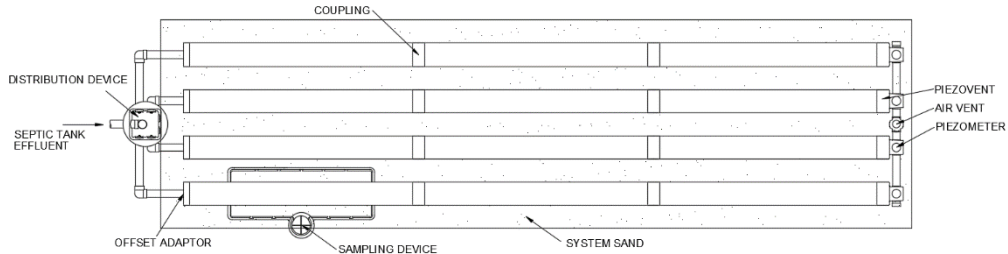


Figure 8. Components installed in ground

System O)) Components Visible

Depending on the distribution device, here are the components visible from the surface.

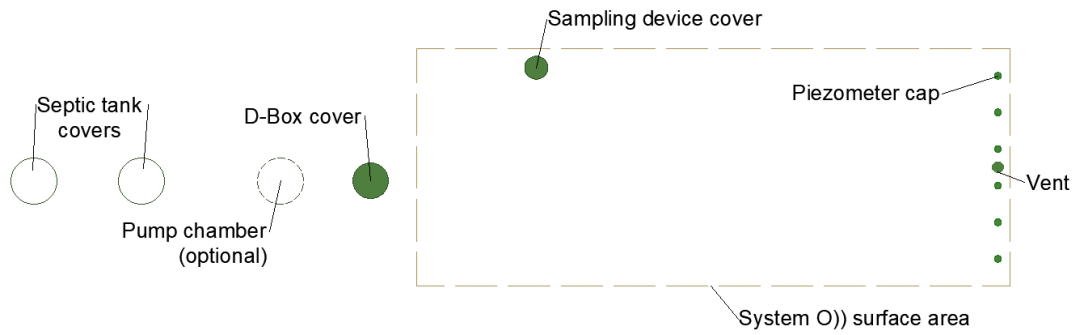


Figure 9. System O)) visible components – Standard configuration

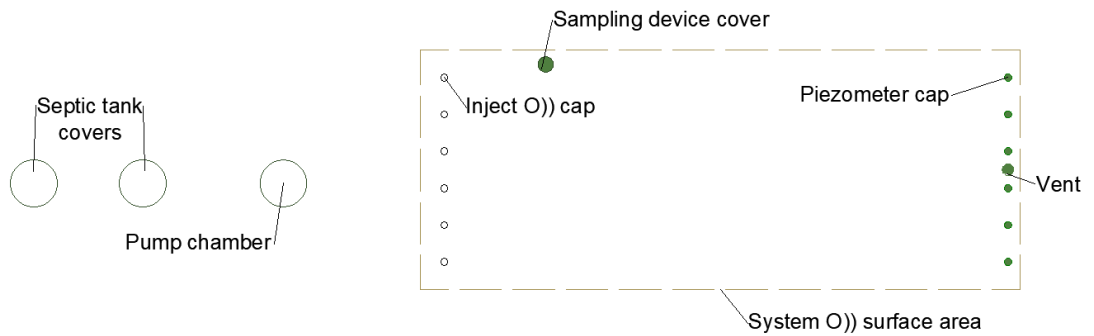


Figure 10. System O)) visible components – LPDS configuration

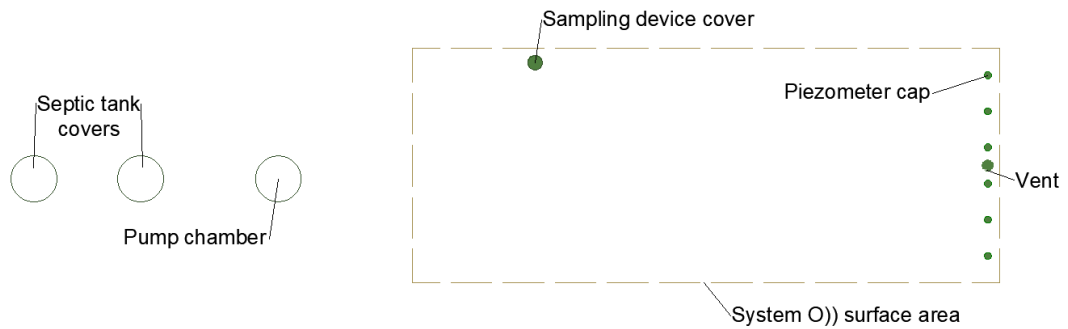


Figure 11. System O)) visible components – Nested pipe configuration

Note: The position of the components may vary according to the layout configuration. The dashed lines represent the position of the System O)), which is not visible from the surface.

Only the vents, the septic tank, the distribution device (distribution box cover or LPDS caps), piezometer caps and the sampling device covers are visible at the soil surface.

If a pump station is used, the cover will also be visible above the soil surface.

Vent The vent does not require any maintenance. The Owner must however ensure that nothing prevents the circulation of air. In the winter, the opening of the pipe must be sufficiently high so that snow does not block the passage of the air. There must also be a difference of at least 3 meters, at all times, between this vent situated at the end of the System O)) and the high vent / stack usually located on the roof.

System Sand There is no maintenance to be done on the system sand during normal use of the System O)).

Pump Station In certain cases, the site constraints require the use of a pump station or a low-pressure distribution system to evenly distribute the wastewater. The Owner is then responsible to comply with the manufacturer's scheduled maintenance requirements of this equipment.

Surface Above the System O)) The ground surface located above the System O)) must be covered with grass. A light slope must be given to the surface in order to help the drainage of surface water towards the outside of the system. The grass must be cut regularly. Finally, any depression / settlement that could be created with time must be filled in with topsoil to avoid any accumulation of water above the system and to prevent erosion.

Responsibilities

Owner

The Owner is responsible for:

- using the System O)) according to the instructions presented in this User Guide.
- Having the septic tank pumped out according to the regulations.
- recording the information for the pumping out of the septic tank and forwarding the information to Make-Way Environmental Technologies Inc. when requested.
- maintaining the effluent filter, the pump station or the automatic wastewater distributing valve according to manufacturer's specifications.
- ensuring that the vent openings are clear of any obstacle, including snow.
- providing access at all times to the System O)), the piezometer covers, the sampling device, the Distribution Box and the vents.
- adhering to the requirements of the applicable rules and regulations, in particular with regards to the discharge standards of the system to the environment.
- having at all times a service / maintenance agreement in place with Make-Way Environmental Technologies Inc. or one of its representatives.

Qualified Person

The qualified person that performs the maintenance or the inspection of a System O)) is a person who was trained and certified by Make-Way Environmental Technologies Inc. to perform the tasks associated with the System O)). Make-Way Environmental Technologies Inc. trains such persons to carry out the inspections of the systems, obtain treated effluent samples and perform adjustments to the equalizers and / or carry out the rejuvenating procedures.

To obtain the name of a qualified person in your area, contact our customer service department at 1-866-MAKE-WAY (625-3929).

For maintenance on the pump station, the Owner must refer to the User Guide specified by the manufacturer of these systems.

The pumping out of the septic tank must be performed by a company specializing in that field. Check with your municipality for the companies in your area that are qualified and licensed to do such sewage pump outs.

What to do if Wastewater Level is High

It is normal to find some level of wastewater in the rows of Advanced Enviro-Septic ® pipe. But it is not okay that the pipes are filled with wastewater to the point of blocking the passage of air. Such a situation could occur if adverse conditions arise (i.e.: broken plumbing, obstruction of the air passage, unwanted water reaching the system, etc.). A high level of wastewater represents an unusual case. Fortunately, the System O)) has the capacity to rejuvenate itself. This makes it possible to practically recreate the original conditions of the wastewater treatment of the System O)).

If the level of wastewater in the piezometers exceeds 260 mm (10.5 inches) please contact Make-Way Environmental Technologies Inc. or your inspection technician who will inform you of what needs to be done. But first, the cause of malfunction affecting the system will need to be corrected. Then, as a general rule, we will suggest one of the following rejuvenating procedures.⁴

There are three rejuvenating procedures possible.

1. The natural rejuvenation that occurs following a reduction of use of the septic system for a period of a few days or weeks (i.e., during a vacation).
2. The forced rejuvenation that consists of pumping out the septic tank and removing wastewater from the System O)) at the same time.
3. The forced rejuvenation with cleaning that consists of pumping out the septic tank and removing wastewater and the inorganic matter that could have accumulated in the pipes over the years.

A qualified person must carry out the forced rejuvenation procedures.

Occasionally, at the time of a forced rejuvenation, the septic tank is not filled with clear water as in the case of a normal procedure. This procedure must then be made at the time when the groundwater is low and that there is no danger that hydrostatic pressures will be exerted on the septic tank.

As a preventive measure, it is recommended to check the wastewater level in the piezometers a few days before performing a regular pumping out of the septic tank. If the wastewater level is too high, the pump out of the septic tank could be done at the same time a forced rejuvenation procedure occurs.

What to do if the alarm goes off

The high-water level alarm of the pump chamber might go off. Here are some things to check on your system before contacting a qualified person.

1. Make sure that the circuit breaker is ON
2. Check if the water level in the pump chamber is indeed high

If all of these elements work properly, contact a qualified person to help with the troubleshooting.

⁴ For the System O)), the rejuvenation procedure could make it possible to bring the system back to its initial state. This is why it is said that the System O)) forgives.

Appendix A - Information Specific to Your Treatment System

**Information on
Your System
O))**

Installation date: _____

Designer / Engineer: _____

Installer: _____

Municipal inspector: _____

Number of rows of pipes: _____

Wastewater Distribution:

- Distribution box
- Pump station
- Wastewater distributing valve
- Pressure distribution system
- Nested pipe

Septic tank capacity: _____

Notes

Appendix B – DBO Expert Twenty Year Limited Warranty

The limited warranty on System O)) pipes is provided DBO Expert Inc.

It is presented below



PIPE WARRANTY CERTIFICATE FOR SYSTEM O)) WASTEWATER TREATMENT TECHNOLOGY

1. PREAMBLE

DBO Expert Inc. (hereinafter "DBO") offers owners (including subsequent owners subject to compliance with the terms of Section 7 of this Agreement) of its System O)) wastewater treatment technology a warranty on the Advanced Enviro))Septic pipes (hereinafter the "Pipes") that are at the heart of System O)).

2. SCOPE OF THE WARRANTY

DBO provides a warranty on the Pipes against any manufacturing defects for a period of 20 years from the date of manufacture. The warranty does not cover labour costs, only the cost of the Pipes. A manufacturing defect means any Imperfection or breakage affecting the Pipes caused by or occurring during the manufacturing process. This warranty is limited to the Province of Ontario.

3. EXCLUSIONS

This warranty does not apply in the following cases:

- Any damage or problem caused by an Act of God such as, without limiting the general scope of the foregoing, earthquake, flood, hurricane, landslide, explosion, blasting, rising water table;
- Any damage or problem resulting from an installation that was not performed in compliance with the Installation Guide provided by DBO;
- Any damage or problem resulting from improper use or maintenance that was not performed according to the instructions provided in the User Guide (Use and Maintenance) provided by DBO;
- Any damage caused by the fault or act of a third party or the owner;
- Any damage resulting from any modification, displacement, correction, or addition made by any person not authorized by DBO.

4. CONDITIONS TO EXERCISE THE WARRANTY

The owner may not perform or have any repairs or checks performed on the System O)) wastewater treatment technology, or attempt to perform any work or make any corrections before such work without first notifying DBO and without DBO or DBO Expert authorized representative having visited the premises to determine the scope of the problem, within a reasonable timeframe after receiving such notice.

5. LIMITATION OF THE WARRANTY

DBO's liability under this warranty shall be limited to the cost of the Pipes only and DBO shall not be liable for any other damage or loss that may be sustained by the owner or any other component of the System O)) wastewater treatment technology.

6. EXERCISE OF THE WARRANTY

In order to exercise this warranty, the owner shall notify DBO in writing immediately upon the appearance of any indication or sign that the integrity of the Pipes has been compromised in whole or in part (e.g. ground subsidence). This notice shall be sent by mail to 501 Giroux Road, Sherbrooke, QC J1C 0J8 or by e-mail to Info@dboexpert.com. Within 15 days of receipt of this notice, DBO will take the necessary steps to assess the situation. The owner shall allow DBO and/or its representatives to perform all necessary checks and inspections for the exercising of this warranty. If the steps undertaken by DBO conclude that no manufacturing defect is found on the Pipes or that the guarantee is excluded here under, a minimum amount of \$125 plus any expenses incurred shall be borne by the owner.

7. TRANSFER OF OWNERSHIP

In the event of the sale, assignment, alienation, or disposition of the property by the owner to a third party, this warranty shall continue to apply. The owner or new owner shall notify DBO of such transfer in writing within 30 days of the transaction either by mail or e-mail. Should such notice of transfer fail to be sent within the prescribed time, DBO may unilaterally terminate this warranty within 30 days of learning about the transfer of the property.

8. SCOPE

The warranty shall ensure the benefit of and be binding upon the parties hereto and their respective heirs, successors, legal representatives, and assigns.

10. ELECTION OF DOMICILE

The parties agree, in respect of any non-contractual or contractual claims or legal proceedings for any reason relating to this warranty or to their relations, to choose the judicial district of Saint-François, Province of Quebec, Canada, as the appropriate venue for the hearing of such claims or prosecutions, excluding any other judicial district that may have jurisdiction over such litigation as stipulated by law.



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