

Ecoflo®

BIOFILTERS



OWNER'S MANUAL

- QUEBEC VERSION

SEPTIC SYSTEM
ECOFLO® FIBERGLASS

BNQ
Certified



Premier Tech
Environment

Ecoflo® Biofilters Fiberglass (Open bottom or with collecting bottom)(-UV/H)

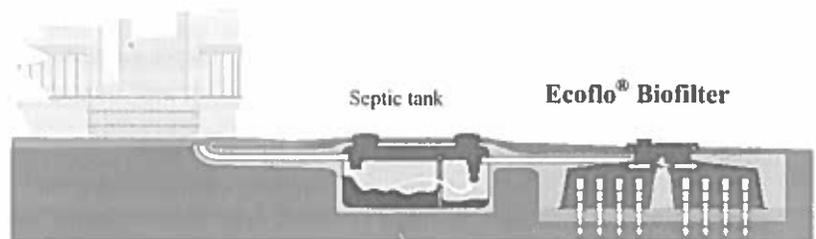
Owner's Manual - Quebec

Congratulations on your purchase of an Ecoflo® Biofilter system. In choosing the Ecoflo® Biofilter system, you have wisely chosen to protect your health as well as the environment. This manual contains information on system operation and maintenance, guidelines for use and warranties for models ST-500/650, STB-500/650 certified according to the NQ 3680-910 standard for an advanced secondary level treatment (Class III) and for models STB-500/650-UV/H certified under the same standard for a tertiary treatment with disinfection (Class V). For additional information, contact our customer service at 1 800 632-6356.

A) Ecoflo® Biofilters ST-500/650 and STB-500/650 (Class III)

Operating Principle

The Ecoflo® Biofilters ST-500, ST-650, STB-500 and STB-650 are made of a fiberglass shell enclosing a natural filtering media composed of two specific layers (bottom and top layers) to purify the wastewater coming from a septic tank before its discharge into the environment. In fact, the Ecoflo® Biofilter's operating principle allows the system to be used continuously or intermittently without requiring any particular precaution and without any impact on the quality of the treatment. No action is required from the owner to start the system.



Your complete Ecoflo® Biofilter system includes a septic tank with an effluent filter, certified according to the NQ 3680-905 standard, one or more Biofilters and, depending on the type of installation, a flow divider or a tertiary treatment unit.

The model and the number of Ecoflo® Biofilters required are determined according to the number of bedrooms in the residence or according to the total daily flow of wastewater, domestic water and toilet water coming from another type of building.

The following table shows the capacity of the different Ecoflo® Biofilter models.

Number of bedroom	Total daily flow (liter)	Number of Ecoflo® Biofilter	
		ST-500 or STB-500	ST-650 or STB-650
1	540	1	-
2	1080	1	-
3	1260	-	1
4	1440	-	1
5	1800	2	-
6	2160	2	-

The models of Ecoflo® Biofilters comply with the requirements and are certified according to Class III (advanced secondary treatment) as described in the NQ 3680-910 standard of the Bureau de normalisation du Québec (BNQ).

Guidelines for Use

Type of wastewater that can be treated by an Ecoflo® Biofilter:

Domestic wastewater (coming from single dwellings)

Avoid :

- using an automatic toilet bowl cleaner
- using a garbage disposal or sewage pump (upstream of the septic tank)

It is strongly recommended NOT to discharge any of the following substances into the sewer:

- water softener backwash
- oil and grease (engine oil, cooking oil, etc.)
- wax and resin
- paint and solvent
- petroleum products
- pesticide of any kind
- any kind of septic tank additive
- toxic substance
- anything not easily biodegradable (e.g. coffee beans, cigarette butts, sanitary napkins, tampons, condoms).



What You Should Know

Owners Responsibility

The owner must respect the laws and regulations in force concerning the effluent quality of the system and its discharge in the environment.

Keep heavy weights off your septic installation

Never drive vehicles or place objects weighing over 225 kg (500 lb) within 3 m (10') of your system's lid. If you are planning to do some landscaping or any other type of work, **make sure you advise those involved** so they do not damage your septic system.

Do not shovel or blow snow that would accumulate on top of the septic system. The overload could cause damage. Mark/indicate the location of your system's components.

About your home

Your home must be equipped with a working air vent, and plumbing must conform to the local building Code. Any change in the use or function of your home, or any modification to your **Ecoflo® Biofilter** system must be authorized by the local authorities, and **Premier Tech Environment (PTE)** must be informed. The warranty for the **Ecoflo® Biofilter** system will be void if this condition has not been fully respected.

TO AVOID:

- Never cover or bury the access lid of the **Ecoflo® Biofilter** system
- Never install a riser on an **Ecoflo® Biofilter** ST-500 or ST-650. For the models STB-500 and STB-650 with collecting bottom use only the riser STR-080 from **Premier Tech Environment** and use only one (1) per **Biofilter**.
- Never locate an **Ecoflo® Biofilter** absorption bed closer than 2 m (6,5') from a tree.
- Never enter the **Ecoflo® Biofilter** system without prior authorization.
- Never connect a drainage pipe or roof gutter to the system.
- Never drive a vehicle or place an object weighing more than 225 kg (500 lb) closer than 3 m (10') from the lid and notify the people in charge of your landscaping.
- Never overload your septic installation with compacted blown snow. The surcharge can cause damage to your system.

Maintenance

ECOFLO® BIOFILTER

As stipulated in Sections 3.3 «Maintenance contract» and 87.10 «Installation, utilization and maintenance» of the *Regulation respecting wastewater disposal systems for isolated dwellings (Q-2, r.8)*: "The owner of a treatment system covered in Sections 11.6, 16.1, 87.7 or 87.13 **must be, at all time, bound by contract with the system's manufacturer, its representative or a third party qualified by stipulation, specifying that a minimum of one annual maintenance will be performed on the system.** The owner must also file a copy of the contract with the local municipality where the system is located" and "the advanced secondary treatment system must be installed, used and maintained according to the manufacturer's guides."

Because annual maintenance is essential to the proper functioning of the **Ecoflo® Biofilter**, it comes with a *maintenance agreement* binding PTE to service the **Ecoflo® Biofilter**, free of charge once a year for the first nine (9) years following the date of installation. This agreement is automatically renewed with the purchase of a new filter media from PTE. Every **Ecoflo® Biofilter** sold has to be serviced annually for the duration of its useful life.

Annual maintenance is carried out by a **PT aqua** authorized agent. This service includes a visual inspection of all components and their operation as well as maintenance of the filtering media. **Easy access to your system's lid is essential for maintenance and filtering media replacement purposes.** You will be given a maintenance record after each inspection, which you should keep with this manual in a safe place.



The filtering media must be replaced when it can no longer assure its filtering performances, as determined by one of PT aqua's specialists depending on use and compliance with the above guidelines. The filtering media is easily pumped out with a regular sewage disposal truck. The new filtering media must be installed by an authorized agent.

SEPTIC TANK

Emptying your septic tank as instructed helps to keep your septic system in proper working order. It is essential to comply with the requirements for septic tank maintenance prescribed by the Q-2, r.8, "*Regulation respecting waste water disposal systems for isolated dwellings*». We recommend that you keep proof of pumping (invoice) with this owner's manual so as to keep a complete record of system maintenance.

What to do in Case of...

Flooding

Certain sites are prone to flooding or high groundwater level, which can cause malfunctioning of the **Ecoflo® Biofilter** or any other septic system. If this happens, contact **Premier Tech Environment**.

Backflow

Backflow rarely occurs in homes. It is generally caused by the septic tank. Your septic system installer or septic tank pumper can usually take care of the situation.

Odors

The positioning of the air vent, as well as other factors unrelated to the **Ecoflo® Biofilter** can prevent proper dispersion of septic gases and lead to odors. If this happens, contact **Premier Tech Environment** for solutions.

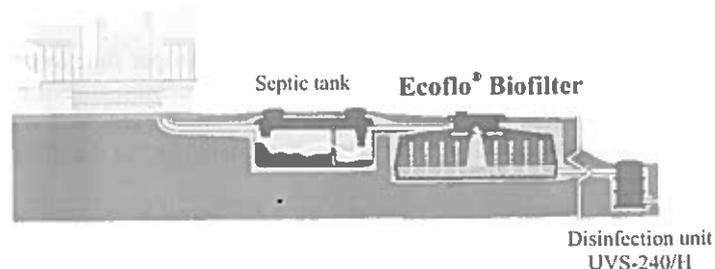
**FOR ANY PROBLEM, QUESTION OR COMMENT, DO NOT HESITATE TO CONTACT
OUR CUSTOMER SERVICE AT 1 800 632-6356**

B) Ecoflo® Biofilter STB-500/650-UV/H (Class V)

The Ecoflo® Biofilter STB-500/650-UV/H is a tertiary treatment system with disinfection certified under the NQ 3680-910 standard (Class V) comprising a septic tank, an effluent filter, an Ecoflo® Biofilter and a Disinfection Unit UVS-240/H. All the information relating to the operation, guidelines for use, maintenance of the septic tank, effluent filter and Ecoflo® Biofilter is presented in Section A) of this document. What follows are the informations concerning the Disinfection Unit UVS-240/H.

Operating Principle

The Disinfection Unit UVS-240/H is composed of a durable polyethylene reservoir containing an ultraviolet lamp (UV). The system is designed to reduce the pathogen concentration of the Ecoflo® Biofilter effluent, in places where it is impossible to use an absorption bed to infiltrate the treated waters. Your complete Ecoflo® Biofilter system includes a septic tank with an effluent filter, certified according to the NQ 3680-905 standard, one or more Ecoflo® Biofilters, a Disinfection Unit UVS-240/H and, depending on the type of installation, a pumping station, a flow divider.



The Disinfection Unit UVS-240 can be used with residence of 4 bedrooms or less, or for any type of building generating domestic wastewater at a maximum daily flow of 1440 L/d. On the other hand, the Disinfection Unit UVS-240H can be used with residences of 5 or 6 bedrooms, or for any type of building generating domestic wastewater at a maximum daily flow of 2160 L/d. The Disinfection Unit UVS-240/H is part of a chain of treatment comprising a septic tank with an effluent filter (certified under the NQ 3680-905 standard) and one or more Ecoflo® Biofilters. This complete Ecoflo® Biofilter System STB-500/650-UV/H is certified according to Class V (tertiary treatment with disinfection) as described in the NQ 3680-910 standard of the Bureau de normalisation du Québec (BNQ).

Guidelines for use

Type of wastewater that can be treated by a Disinfection Unit UVS-240/H:

Treated domestic water coming from an advanced secondary treatment system complying with the requirements of class III as described in the NQ 3680-910 standard.

Avoid :

- using an automatic toilet bowl cleaner
- using a garbage disposal or sewage pump (upstream of the septic tank)

IMPORTANT:

Drinking water analysis:

To avoid any malfunction of the treatment system with UV disinfection, the characteristics of the drinking water used at your residence **must comply with the following maximal values:**

- Hardness: concentration < 120 mg/L;
- Iron: concentration < 0,3 mg/L;
- Manganese: concentration < 0,05 mg/L.

Drinking water treatment systems

If your residence is equipped with a drinking water treatment system (ex: water softener, greensand filter, etc.) it is strictly prohibited to discharge backwash from these systems to the septic tank of your wastewater treatment system with UV disinfection.

What You Should Know

Keep heavy weights off your septic installation

Never drive vehicles or place objects weighing over 225 kg (500 lb.) within 3 m (10') of the lid. If you are planning to do some landscaping or any other type of work, **make sure you advise those involved** so they do not damage your septic system.

Do not shovel or blow snow so that it accumulates on top of the septic system. The overload could cause damage. Mark/indicate the location of system components.

About your home

Your home must be equipped with a working air vent, and plumbing must conform to the local building Code. Any change in the use or function of your home, or any modification to your **Disinfection Unit UVS-240/H** must be authorized by the local authorities, and **Premier Tech Environment** must be informed. The warranty for the **Disinfection Unit UVS-240/H** will be void if this condition has not been fully respected.

Visual and audio alarm system

The **Disinfection Unit UVS-240/H** is equipped with 2 types of alarms linked to the same box. The first one detects a high water level in the reservoir where the disinfection unit is located. The second one detects an electrical malfunction of the disinfection unit. The operating principle of these alarms is presented below.

High water level alarm and UV lamp malfunction alarm

The red light will come on when the disinfection unit reservoir water level is abnormally high or if the UV lamp is not functioning properly. A verification must then take place. The « **TEST** » button allows checking if the alarm system is functioning properly. On testing, the red light and the audio alarm should come on.

If an alarm comes on, call **Premier Tech Environment** for support. The alarm can be turned off by pressing the « **SILENCE** » button.

During power failure, the alarm system will still be operational via a 9 volt battery back up. When the battery is low, you will hear short beeps every minute. It is time to replace it.



High water level and UV lamp malfunction alarm

Note : It is recommended to replace the alarm battery every 12 months and each time an alarm comes on or there is a power failure.

To replace the battery, follow this procedure:

- Unplug the alarm panel and remove it from the wall (the battery is located under the panel or on the side).
- Open the battery cover and replace the battery with a 9 volt Nicad type.
- Close the battery cover and reinstall the alarm panel and plug it.
- If the alarm comes on at start up, press the **RESET/TEST** button to initialize it.

Warning concerning the connection of the Disinfection Unit UVS-240/H

As per article 87.16 of the *Regulation respecting waste water disposal systems for isolated dwellings* (Q-2, r.8), it is prohibited to not connect, disconnect or not replace the UV lamp of a disinfection system with UV rays.

TO AVOID :

- Never cover or bury the access lids of the components of your septic installation
- Never access the reservoir of your Disinfection Unit without prior authorization after its final installation.
- Never connect a drainage pipe or roof gutter to the system.
- Never drive a vehicle or place an object weighing more than 225 kg (500lbs) closer than 3 m (10') from the lid and notify the people in charge of your landscaping.
- Never overload your septic installation with compacted blown snow. The surcharge can cause damage to your system.

System Maintenance and Effluent Analysis

According to article 87.16 of the *Regulation respecting wastewater disposal systems for isolated dwellings* (Q-2, r.8) a tertiary treatment system must be installed, used and maintained according to the manufacturer's guides.

It is also mentioned in article 87.30.1 of the same regulation that the owner of a tertiary treatment system with disinfection must have a sampling of his system's effluent analysed at least once every 6 months, to find out its concentration in fecal coliforms. The owner must retain the analysis reports for a period of 5 years. He must also make these reports available to the Minister of Sustainable Development, Environment and Parks as well as to the municipality where the system is located.

Maintenance of your Disinfection Unit UVS-240/H will be performed twice a year by **PT aqua** or its authorized agent. A proof of visit will be supplied after each maintenance. We recommend keeping it with this owner's manual. Take note that the UV lamp will be replaced once a year. **PT aqua** also offers to take care of your effluent analysis every 6 months.

What to do in case of...

Setting off of an alarm

If the alarm of your **Disinfection Unit UVS-240/H** comes on and it is not due to power failure, contact **PTE** to identify and correct the problem.

Flooding

Some grounds are subject to flooding or high groundwater table. These circumstances can affect the operation of your septic installation and alter the performance of your **Disinfection Unit UVS-240/H**. Contact **PTE** if this happens.

Backflow

Backflow rarely occurs in homes. It is generally caused by the septic tank. Your septic tank installer or septic tank pumper can usually take care of the situation.

Odors

The positioning of the air vent, as well as other factors unrelated to the **Ecoflo® Biofilter**, can prevent proper dispersion of septic gases and lead to odors. If this happens, contact **PTE** for solutions

**FOR ANY PROBLEM, QUESTION OR COMMENT, DO NOT HESITATE TO CONTACT
OUR CUSTOMER SERVICE AT 1 800 632-6356**

For further information or comment, please contact our customer service:



**Premier Tech
Environment**

1, avenue Premier, Rivière-du-Loup (Québec) G5R 6C1 CANADA

☎ 1.800.632.6356 / 418.867.8883

@ PTE@PREMIERTECH.COM

☎ 418.862.6642

🌐 WWW.PTEENV.COM

The content of this guide is based upon the latest information available at the time of printing and is aimed at providing a general introduction to Premier Tech's products. No warranty or representation is hereby made by Premier Tech as to the accuracy of said information. Premier Tech is continually updating and improving its products and reserves the right to amend, discontinue, alter or change specifications and prices without prior notice.

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CERTIFICATE OF WARRANTY FOR ECOFLO[®] BIOFILTERS ST-500/650 and STB-500/650 (-UV/H)

1. Preamble

Premier Tech Technologies Ltd. (hereinafter called "Premier Tech") is proud to provide its customers with an exclusive wastewater treatment system guaranteed by an innovative warranty.

For the purposes of this warranty, "Customer" shall mean the person who has acquired (hereinafter called "Initial Purchaser") an Ecoflo[®] Biofilter ST-500, ST-650, STB-500 (with or without UV treatment) (hereinafter called "STB-500(-UV/H)") or STB-650 (with or without UV treatment) (hereinafter called "STB-650(-UV/H)") as well as any subsequent purchaser (hereinafter called "Subsequent Purchaser(s)"), according to the dispositions of paragraph 8 of this present warranty. "Successor(s)" shall mean any other person entitled to exercise Customer's rights under the law.

2. Nature of Warranty

Premier Tech warrants to its Customer that the filtering media of the Ecoflo[®] Biofilters ST-500, ST-650, STB-500(-UV/H) and STB-650(-UV/H) will function properly for a period of ten (10) years starting on the date of purchase by the Initial Purchaser.

Premier Tech also warrants the fibreglass components and other components of the Ecoflo[®] Biofilters ST-500, ST-650, STB-500(-UV/H) and STB-650(-UV/H), except for the Disinfection Unit UVS-240/H included in model STB-500(-UV/H) and STB-650(-UV/H), against any manufacturing defects for a period of thirty (30) years starting on the date of purchase by the Initial Purchaser. The Disinfection Unit UVS-240/H included in models STB-500(-UV/H) and STB-650(-UV/H) is guaranteed for (1) year, parts and labor, starting on the date of purchase by the Initial Purchaser.

This warranty of effectiveness, sound manufacture and durability is given by Premier Tech to the Customer in addition to the legal warranty set out in Articles 1726 to 1730 of the Quebec Civil Code, and is a conventional warranty applicable under the terms and conditions of this warranty certificate. The conventional warranty of Premier Tech is expressly limited to the text of this certificate.

3. Notice

For this warranty to be valid, the Customer must notify Premier Tech in writing immediately upon the appearance of any indication of an anomaly or irregularity in the Ecoflo[®] Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H).

Such notice must be given by mail to Premier Tech's head office at 1, avenue Premier, Rivière-du-Loup, Québec, G5R 6C1 or by facsimile at (418)-862-6642.

Upon receipt of this notice, Premier Tech will examine the situation and, if necessary, take appropriate corrective measures in accordance with the terms of the present warranty.

4. General Exclusions

The following damages or problems are excluded from the warranty:

(a) Any damage or problem caused by a fortuitous event or "force majeure", such as, without limiting the generality of the foregoing, earthquake, flood, hurricane, landslide, explosion or dynamiting;

(b) Any damage or problem caused by the fault or act of a third party;

(c) Any damage or problem arising from a defective installation carried out by a person trained by Premier Tech, or any installation, modification, correction or addition carried out by a person not trained by Premier Tech;

(d) Any damage or problem arising from any installation, modification, correction or addition to the treatment system carried out after installation of the Ecoflo[®] Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H) without Premier Tech's prior written approval;

(e) Any damage or problem caused by the use of a septic tank which does not comply with the applicable regulations and/or with Premier Tech's specifications, as described in this owner's manual.

(f) Any damage or problem, if it is demonstrated that the Ecoflo[®] Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H) has not been used in accordance with the instructions and guidelines contained in the owner's manual;

(g) Any damage or problem, if the maintenance of the Ecoflo[®] Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H) has not been executed by a person authorized by Premier Tech in accordance with the maintenance agreement;

(h) Any damage or problem caused by the fault or action of the Customer or the Customer's Successors including, without limiting the generality of the foregoing, refusal to allow access to the system for maintenance;

(i) Any damage or problem, if it is found that the Customer has modified or changed the use of the property served by the Ecoflo[®] Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H) resulting in the alteration of the nature or quality of wastewater being treated and/or that constitutes a violation of the applicable regulations;

(j) Any damage or problem caused and/or resulting of the works performed in order to access to the Ecoflo[®] Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H), including without limiting the generality of the foregoing, excavation, snow-removal or demolition;

(k) Any damage or problem resulting from site's and/or soil's prior condition not reported or not properly reported to Premier Tech by the Customer or the person performing the site investigation.

5. Particular Exclusions

It is further expressly understood that the Customer may not carry out or cause to be carried out any repair or verification of the Ecoflo[®] Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H) sold, or attempt to carry out any work or to apply any corrective measures whatsoever to said work, before notifying Premier Tech in accordance with the provisions of section 3 of this warranty and before Premier Tech has visited the site to verify the situation, within a reasonable time following receipt of said notice.

If the Customer carries out or causes to be carried out repairs, or attempts to carry out any work or to apply corrective measures of any kind whatsoever to the Ecoflo[®] Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H) sold, without prior authorization by Premier Tech, this warranty shall be considered null and void and Premier Tech shall be considered completely discharged from any and all of its obligations under this warranty.

CERTIFICATE OF WARRANTY FOR ECOFLO® BIOFILTERS ST-500/650 and STB-500/650 (-UV/H)

6. Indemnities and Damages

Premier Tech's liability and obligations under this warranty shall be in any event limited to the replacement of the filter media and/or of one or several components of the Ecoflo® Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650 (-UV/H) as well as the supply of the required labour, if applicable, in accordance with sections 3 and 4.

7. Limitation of Liability

Premier Tech may not be held liable for any other damage sustained by the Customer. Premier Tech's obligation for compensation or indemnification shall be limited to the provisions of section 6 of this warranty.

8. Transfer of Ownership

In the event of transfer of ownership, sale, assignment or any other type of disposition of Customer's property to a third party, this warranty shall continue to apply only if the Subsequent Purchaser or its Successor confirms, by transmitting to Premier Tech the attached "Notice of Warranty Transfer", within a reasonable delay, that he/she is the new owner of the property, he/she understands and is aware of the content of this warranty certificate and accepts its terms and conditions.

The person proceeding to the transfer of the property, sale, assignment or any other type of disposition, undertakes to hand over to the Subsequent Purchaser or its Successor, the warranty certificate remitted upon completion of the work, as well as the owner's manual and, when applicable, the maintenance and environmental monitoring program for the Ecoflo® Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H).

Default to respect the conditions of the present Section 8 may cause, at Premier Tech's discretion, abandonment or rejection of the present warranty.

9. Inspection

The Customer and/or the Customer's Successors shall allow Premier Tech or its duly authorized representative to carry out all necessary monitoring and inspection required for implementation of this warranty.

If the Customer or the Customer's Successors request the execution of the present warranty and that it is found after inspection and verification that the Ecoflo® Biofilter ST-500, ST-650, STB-500(-UV/H) or STB-650(-UV/H) is performing in accordance with the standards and specifications of Premier Tech, a minimum charge of \$150 plus direct expenses shall be paid by the Customer and/or the Customer's Successors for the cost of such inspection. Otherwise, no charge shall be billed by Premier Tech.

10. Interpretation

The terms of this warranty shall be interpreted and governed by the law in force in the Province of Quebec and the provisions of this Agreement.

11. Priority of the Certificate of Warranty

In case of contradiction between this warranty and any other documents and/or contracts entered into between the Customer and Premier Tech, this warranty shall prevail.

12. Subsequent Purchasers and Successors

Subject to the provisions of this warranty and of section 8 in particular, this warranty shall continue to apply to the Subsequent Purchasers and Customer's Successors and shall continue to have full effect until the end of the agreed warranty period provided for in section 2 of this certificate.

Notice of Warranty Transfer

Name of the Former Owner : _____

I, the undersigned _____ hereby declare that I have acquired the property located at

number street

City

Province

Postal code

(_____) _____

Phone number

I have read and I understand the warranty provided by Premier Tech Technologies Ltd for the Ecoflo® Biofilter. I wish to benefit from this warranty for the remaining period, if any; I accept to be bound by this warranty and by any and all of the clauses, undertakings and conditions set forth therein; I have had the opportunity to examine the Ecoflo® Biofilter and declare myself satisfied with it at the time of this transfer.

I ask Premier Tech Technologies Ltd to take note of this transfer of ownership.

Signature : _____

Date : _____

Name of new owner: (print) _____