

Ecoflo® Biofilter - Polyethylene

Installation Guide-Ontario

*This guide contains the information required to install a **Polyethylene Ecoflo® Biofilter** Certified under the **CAN/BNQ 3680-600 requirements**. The installation must be performed by an authorized installer. A list of installers can be provided by contacting our customer service at **1 800 632-6356**.*

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1. Technical data

Component material

- **Shell:** polyethylene
- **Cover, central support, tipping bucket, distribution plates and sampling device:** polyethylene
- **Filtering media:** natural fiber

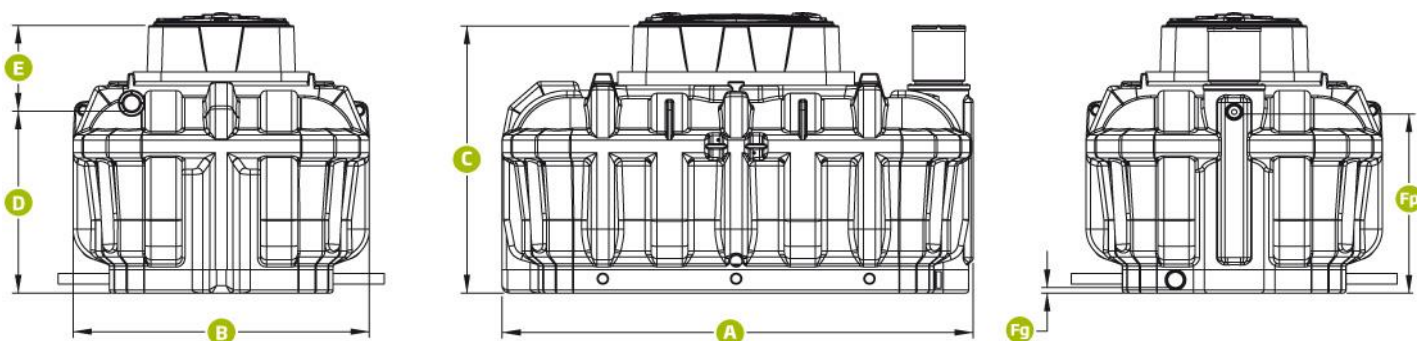
models	STB-570-P/PR	
Type of shell	Polyethylene	
Hydraulic capacity Demand dosed option	1,755 L/d	
Hydraulic capacity Time dosed option	2,195 L/d	
Type of disposal	Gravity or Pumped	
Type of bottom	Watertight	
Length (A)*	3,380 mm (11' 1")	
Width (B)*	2,000 mm (6' 7")	
Height (C)*	1,850 mm (6' 1")	
Inlet Height (D)*	1,260 mm (4' 2")	
Inlet Height (E)*	590 mm (1' 11")	
Outlet Height (Fg and Fp)*	Gravity model 38 mm (1½")	Model with integrated pump 1,240 mm (4' 1")
Weight** (including internal components and filtering media)	Gravity model 1,190 kg (2,620 lb)	Model with integrated pump 1,200 kg (2,640 lb)
Dosing Volume	With Integrated pump : 145 L (38 US gal)	
Retention Volume (between bottom of the shell and the bottom of the filtering media)	With Integrated pump : 500 L (130 US gal)	

* See drawings on page 3.

** Weights are approximate and not binding (for handling and lifting purposes only).

Models	STB-730P/PR		
Type of shell	Polyethylene		
Hydraulic capacity Demand dosed option	2,250 L/d		
Hydraulic capacity Time dosed option	2,810 L/d		
Type of disposal	Gravity or Pumped		
Type of bottom	Watertight		
Length (A)*	4,140 mm (13' 7")		
Width (B)*	2,050 mm (6' 9")		
Height (C)*	1,850 mm (6' 1")		
Inlet Height (D)*	1,260 mm (4' 2")		
Inlet Height (E)*	580 mm (1' 11")		
Outlet Height (Fg and Fp)*		Gravity Model 38 mm (1½")	Model with integrated pump 1,240 mm (4' 1")
Weight** (including internal components and filtering media)		Gravity Model 1,405 kg (3,100 lb)	Model with integrated pump 1,415 kg (3 120 lb)
Dosing Volume	Model with integrated pump : 110 L (29 US gal)		
Retention Volume (between bottom of the shell and the bottom of the filtering media)	Model with integrated pump : 715 L (190 US gal)		

* Weights are approximate and not binding (for handling and lifting purposes only).



2. Description of system components

2.1 Primary treatment

The primary treatment consists of a primary reactor which clarifies wastewater by letting suspended solids settle to the bottom and retaining floating matter to avoid clogging the treatment system located downstream. An effluent filter is installed at the outlet of the primary reactor. All primary reactors and effluent filters must comply with local regulations.

Regardless of the septic system, opting for a primary reactor that is larger than as specified in the regulation will contribute to improved effluent treatment performance. The Ecoflo® Biofilter can be installed with a concrete or polyethylene primary reactor.

The effluent filter contributes to extending the useful life of any treatment system by reducing the solids in the wastewater before it is discharged from the primary reactor. The use of an effluent filter is especially important if a residence is equipped with a garbage disposal unit, a sewage pump or any other device that could increase the quantity of suspended matter in the wastewater and lead to premature clogging of the treatment system. In the case of Demand dose only, the effluent filter incorporates a flow control device.

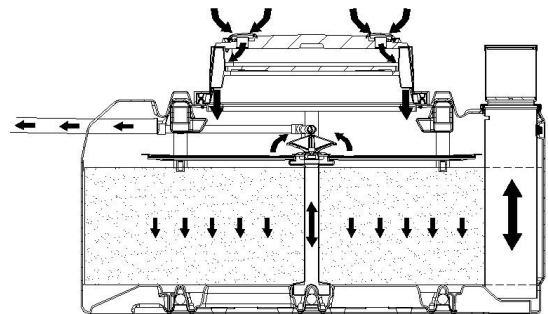
2.2 Dosing tank and control unit (Time dosed biofilter only)

A dosing tank of sufficient volume must be installed downstream from the primary reactor to feed the Ecoflo Biofilter. The dosing tank's pump is connected to the PTA DCU-100 simplex control panel or the equivalent to feed the Ecoflo® Biofilter 20 hours per 24-hour period. Premier Tech Aqua recommends feeding each Ecoflo® Biofilter between 30 and 40 litres (8 and 10 US gallons) per hydraulic event.

2.3 Ecoflo® Biofilter

Once the primary treatment is complete, the wastewater flows from the primary reactor to the Ecoflo® Biofilter, where it flows into a tipping bucket that equally distributes it along the distributor plates installed on either side of a central support. The wastewater then trickles through a filtering media composed of natural fibers. The organic matter contained in the wastewater is then consumed by the microbial flora fixed onto the particles that compose the filtering media.

Finally, the treated effluent is discharged into the environment, either by infiltration in an absorption bed located directly under the Ecoflo® Biofilter or release into a watercourse, provided certain conditions are met and in accordance with local regulations.



**Air flow diagram
(polyethylene shell)**

To ensure effective treatment, there must be enough oxygen present in the system to feed the microorganisms in the filtering media. Air enters the system through vents located on the main access cover. Depending on the biofilter model used by the treatment system, the pumping station and/or central support allows air to circulate between the surface and base of the filtering media. Air circulates throughout the system by way of convection from the residence's vent (or a standalone vent) through a feed pipe to the primary reactor.

An Ecoflo® Biofilter's operating principle allows the system to be used continuously or intermittently without requiring any special precautions or having any impact on the quality of the treatment. In most cases, no specific action from the owner is required to start the system.

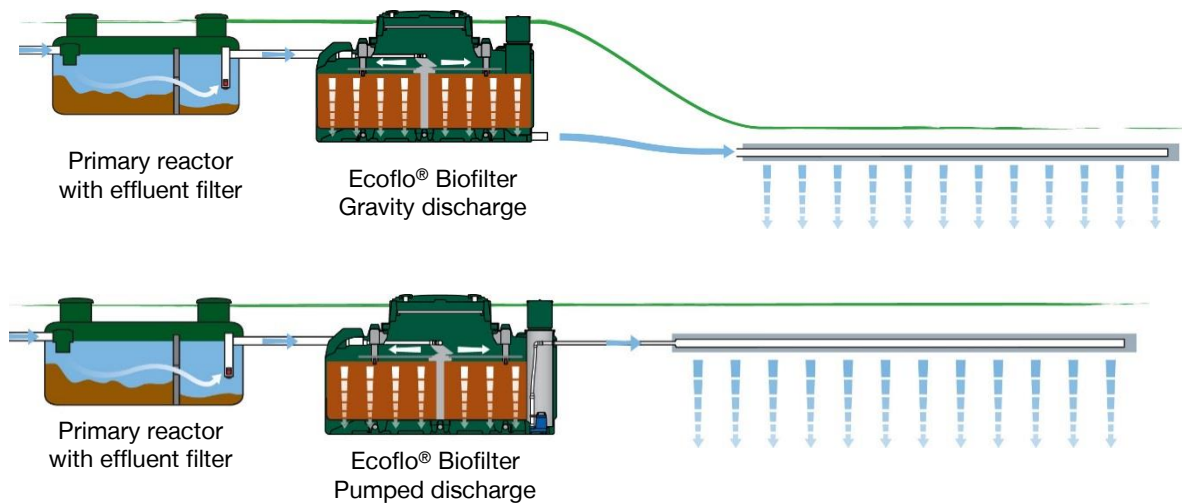
The Ecoflo® Biofilter model and number of units required are determined based on the number of bedrooms in the residence or the total daily volume of domestic wastewater generated by any other type of building. It is also determined in accordance with the surface area and existing topography and soil characteristics (nature, permeability, depth).

There are many different Ecoflo® system models, and each model has different characteristics: type of shell used, treatment capacity based on the number of bedrooms and presence or not of a recovery pump built into the shell.

Ecoflo Biofilter	
Shell (type of)	Polyethylene
Treatment capacity	5.7 = 1,755 L/d Demand dosed or 2,195 L/d Time dosed 7.3 = 2,250 L/d Demand dosed or 2,810 L/d Time dosed
Bottom (type of)	Watertight
Discharge (type of)	Gravity or pumped

3. Location of components and specific instructions

3.1 Installation diagrams (demand dosed feeding)



3.2 Minimum distances to be maintained in accordance with the regulation in force

In the case of an isolated dwelling, a wastewater treatment system must be installed in a place:

- where there is no motorized traffic;
- where it is not likely to be submerged;
- that is accessible for haulage and maintenance;
- that complies with the distances in the following table:

Minimum distances to be maintained in accordance with the regulation in force and Premier Tech Aqua specifications*

Reference point	Primary reactor	Ecoflo® Biofilter with watertight bottom
Residence	1.5 m (5 ft.)	1.5 m (5 ft.)
Drain line	**	N/A
Property limits	1.5 m (5 ft.)	1.5 m (5 ft.)
Top of a talus	**	N/A
Water well or source	15 m (50 ft.)	15 m (50 ft.)
Tube well	15 m (50 ft.)	15 m (50 ft.)
Drinking water line	1.5 m (5 ft.)	1.5 m (5 ft.)
Swamp or pond	10 m (33 ft.)	10 m (33 ft.)
Lake or watercourse	Beyond the shoreline limits	Beyond the shoreline limits
Vehicle or object weighing ≥ 225 kg (500 lbs.)	**	4 m (13.1')***

* The infiltration zone comprises a layer of crushed stone laid down directly under the biofilter or discharges into the environment.

** Refer to the manufacturer's specifications.

*** Distance calculated from the cover of the Ecoflo® Biofilter.

3.3 Installation conditions

3.3.1 Primary reactor

The primary reactor must be installed in compliance with the following instructions:

- Both openings must be extended to the soil surface through watertight and insulated chimneys and equipped with watertight covers;
- The depth of the backfill piled over the tank must not exceed 90 cm (36 in.);
- The installation must be 100% watertight and only receive the residence's domestic wastewater (no foundation, land or roof drainage);
- The primary reactor must be placed where it is not at risk of being flooded or submerged (depending on the situation, it may be necessary to provide for drainage around the primary reactor to prevent groundwater from reaching a level that would pose a flooding risk);
- The manufacturer's specifications.

3.3.2 Polyethylene Ecoflo® Biofilter

The Ecoflo® Biofilter must be installed in compliance with the following recommendations and **it is important to notify all stakeholders (installer, landscaper, owner, snow removal company, etc.) of them** to prevent damage to the wastewater processing system components.

- Ensure access to the covers of your septic installation at all times. NEVER cover them with mulch, soil or a fixed structure.
- Once your septic installation has been completed, the covers must be 50 mm (2 in.) higher than the surface of the landscaped terrain.
- **NEVER install extensions over the access of the polyethylene Ecoflo® Biofilter.**
- NEVER plant trees within 2 m (6.5 ft.) of the infiltration zone.
- NEVER connect a land or foundation drainage line, gutter spout, sump or bilge pump or air conditioner drain to your septic installation.
- **NEVER pile up more than 300 mm (12 in.) of backfill on the shell.**
- NEVER drive a vehicle or place objects weighing more than 225 kg (500 lbs.) within a radius of 4 m (13' 1'') from the covers of the Ecoflo® Biofilter.
- Ensure a rapid regrowth of the vegetation to prevent soil erosion.
- Ensure that the maximum seasonal groundwater level never exceeds the base of the shell.
- When dual biofilters are installed with pumped discharge, it is possible to combine a watertight-bottom biofilter with gravity discharge and a watertight-bottom biofilter with an integrated. The base of a biofilter with a gravity discharge must be from 25 mm (1 in.) to 75 mm (3 in.) higher than the base of a biofilter with pumped discharge.

Also, the Ecoflo® Biofilter with a perforated bottom must be installed in a location:

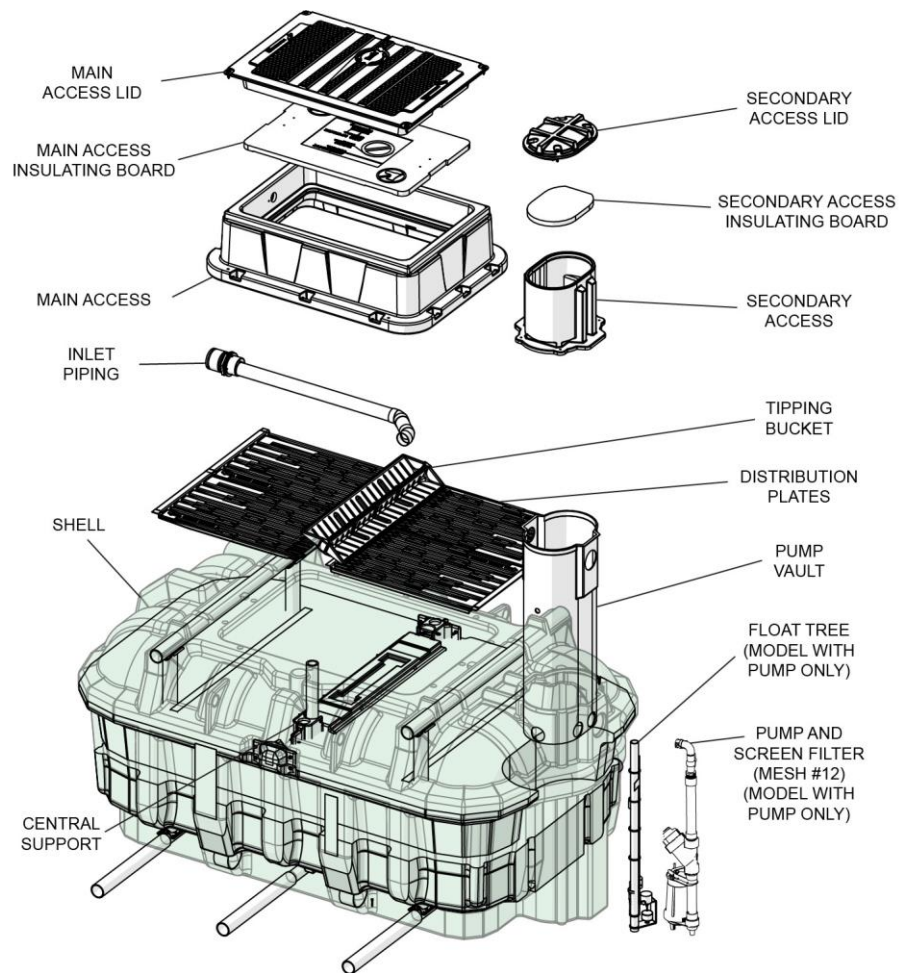
- Where the soil is permeable or very permeable;
- That is never susceptible of being flooded or submerged by ground water. If that is the case, an Ecoflo® Biofilter with a watertight bottom should be used. Please contact our customer service department for further information.

By respecting these guidelines, you contribute to the proper operation of your wastewater treatment system. Failure to abide by these guidelines may void the warranty, at Premier Tech's discretion

3.4 Dosing tank and control unit (Time dosed biofilter only)

The dosing tank and the control panel must be installed in compliance with the manufacturer's specifications.

4. Polyethylene Ecoflo® Biofilter components description



Exploded view of the Polyethylene Ecoflo® Biofilter

Lids

- Access port for maintenance and inspection – main and secondary access;
- Air intake from the main lid provides proper air flow through the system;
- Secure both openings with bolted assemblies.

Insulating boards

- Thermally insulate the system;
- Guides airflow into the shell's air ducts (main access);
- Seals the system (main access).

Shell

- Encloses the system's components;
- Allows connection of water and air pipes;
- Collects the treated effluent (STB models).

Central support

- Supports the tipping bucket and one end of the distribution plates;
- Allows air circulation between bottom and top of the filtering media.

Support rails

- Support the other end of the distribution plates.

Tipping bucket

- Evenly distributes the wastewater on both sides of the filtering media;
- Creates hydraulic events required for proper distribution of the wastewater on the distribution plates and, at the same time, contributes to the self-cleaning of the plates.

Distribution plates

- Allow even distribution of the influent on the surface of the filtering media.

Filtering media

- Consists of a natural fibre-based filtering media;
- Promotes good biomass growth which is essential to biological treatment of the wastewater;
- Physically filters the solids contained in the influent;
- Maintains adequate humidity level required for biomass viability when there is no water going through the system for a certain amount of time.

Treated effluent collection area

- Allows proper drainage of the treated effluent;
- Allows air to circulate under the filtering media.

Pump vault / secondary access (if applicable)

- Allows air circulation between bottom and top of the filtering media;
- Allows access to the base of the system to collect a sample of the treated effluent;
- Encloses the following pumping equipment: pump, screen filter, On/Off float and alarm float (models with integrated pump);
- Allows treated effluent to be sent towards the available disposal method (models with integrated pump).

If you have a problem, or a part is defective or missing, do not hesitate to contact our customer service department at 1 800 632-6356.

5. Installation sequence

IMPORTANT: The installer is responsible for taking the necessary safety measures at all steps of the installation. This includes the use of hardhats, gloves, boots, safety glasses, masks, etc.

5.1 Primary reactor

The primary reactor must be installed in compliance with the manufacturer's specifications.

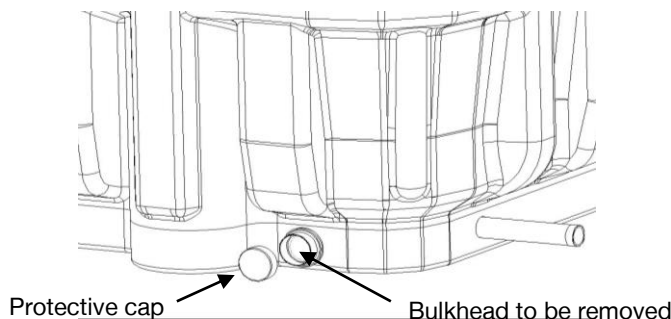
5.2 Dosing tank and control unit (Time dosed biofilter only)

Connect the primary reactor and any all other equipment to the dosing tank with pipes that meet applicable standards. A minimum 2% downward slope must be provided to the dosing tank. The dosing tank and control panel must always be installed in compliance with the manufacturer's specifications. **All electrical connections must be made by a professional electrician.**

5.3 Excavation, bedding and placing of the watertight bottom Ecoflo® Biofilter (STB models)

Excavate an area of approximately 3.0 m x 4.5 m (10' x 15'). Depending on soil conditions, it might be necessary to add a layer of 150 mm (6") of either 0 to 20 mm (0 to ¾") diameter gravel void of any plant material or clean 20 mm (¾") diameter gravel surrounded by geotextile (over the excavated area). Place the shell in the center of the excavated area. Check that the height of the installation is adequate. **There are no risers available for polyethylene Ecoflo® Biofilter models.** Make sure the shell is levelled and rests on all points of the previously levelled and compacted bed.

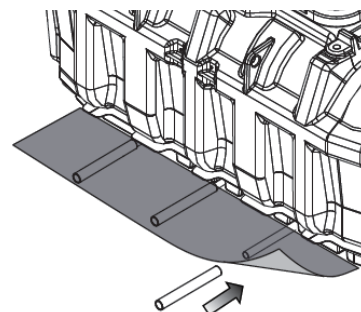
If you are installing a gravity discharge watertight bottom Ecoflo® Biofilter model, before going any further with the installation, connect the effluent discharge pipe using a flexible, watertight outlet adaptor. Remove the protective cap and punch the bulkhead of the outlet adaptor. No debris resulting from that operation must be left in the Ecoflo® Biofilter.



Connect the pipe to the Ecoflo® Biofilter. The pipe must have a constant downward slope until it reaches the disposal area. The soil under the pipes must be properly compacted.

5.4 Extension pipe and membrane installation (STB models)

To ensure a maximum of stability, install the six (6) pipe extensions on the existing pipes assembled on the shell. Lay the membrane on the extension pipes on both sides of the shell. Spread and level the fill material over and under the membranes.

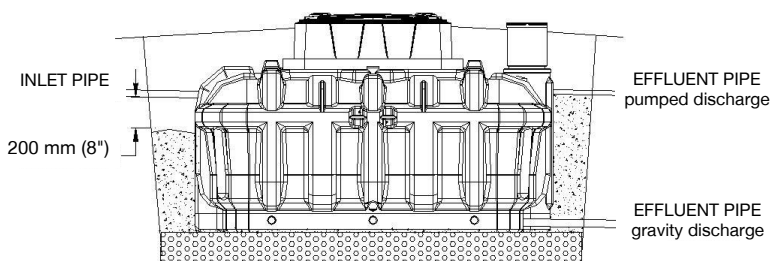


5.5 Initial backfill of the shell

Place backfill material around the shell up to 200 mm (8") underneath the invert of the inlet pipe. Start with the long sides and finish with the short sides. The backfill material must be placed with care and not dumped (do not compact with bulldozer).

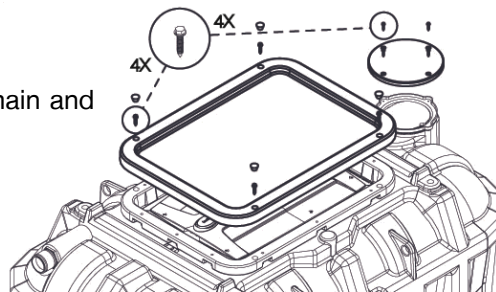
The backfill material must be sandy, with no rocks or stones.

CAUTION: Make sure the backfill material stays out of the shell during the backfill operation.

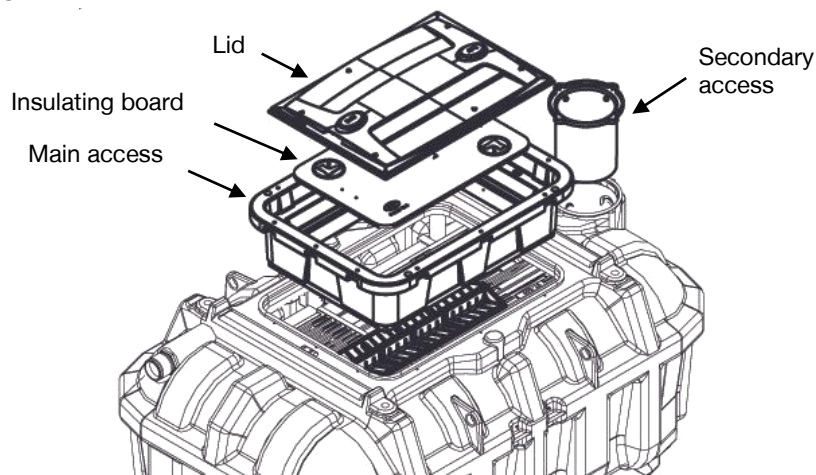
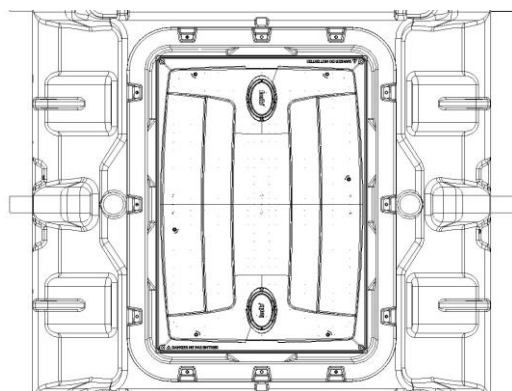


5.6 On site assembly

- Unscrew and remove the protective shipping material found on the main and secondary access.

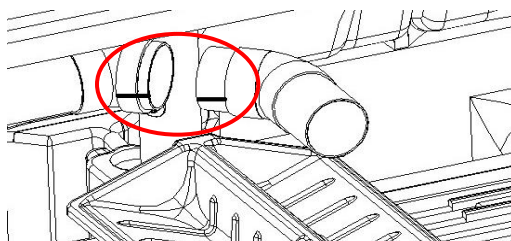


- Remove the main and the secondary access. The main access assembly includes the lid and the insulating board. To remove the lid, unscrew the four lag screws in the four corners of the lid.

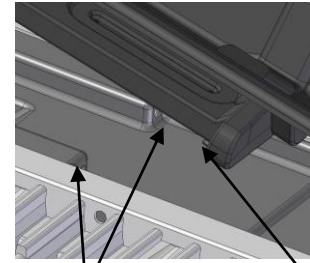
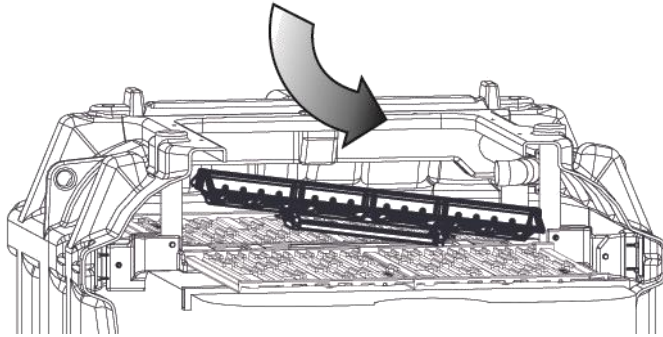


- Glue in place the elbow assembly on the water inlet pipe. Align marks to ensure that the elbow assembly is correctly positioned. Once in place the inlet pipe must be centered with the tipping bucket. The elbow assembly is packaged in the components box. This box is shipped with the biofilter and is located in the main access.

CAUTION: Do not reverse the elbow. The water inlet would then be off center.



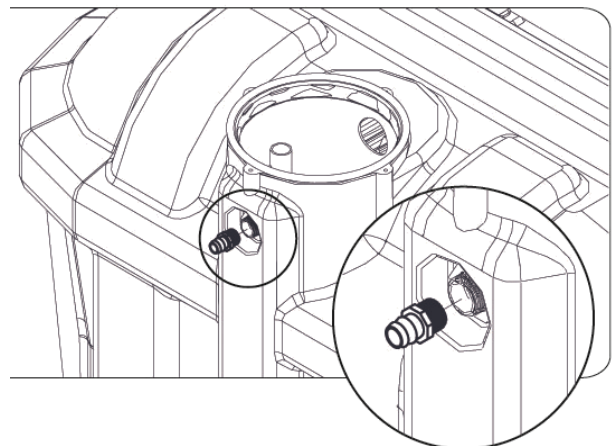
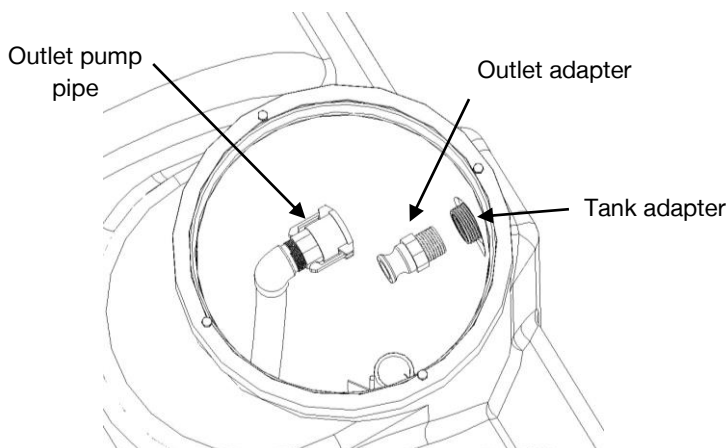
- Attach the tipping bucket to the central support by inserting the two (2) locking catches into the central support's anchor slots. Bring down the opposite end to make sure the tipping bucket stays in place. Check the state of the tipping bucket by moving it from left to right to make sure nothing is blocking its movement.



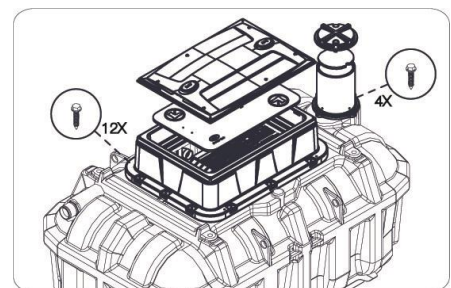
Anchor slots

Locking catch

- **Make sure that:**
 - The distribution plates are properly installed;
 - The float tree and the pump are correctly positioned (models with integrated pump);
 - The tipping bucket tilts correctly on both sides.
- Screw in the pump outlet adapters (models with integrated pump). These adapters can be found in the components box (shipped within the main access of the biofilter). For the outlet, there are available two adapters in the box of 1" and 1½".

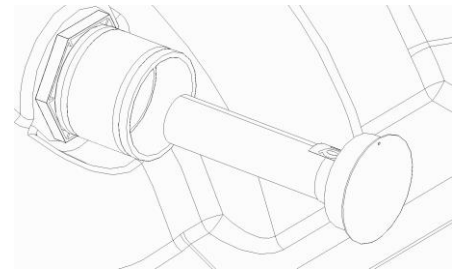


- Screw in place the main and the secondary access with the supplied lag screws and place the insulating boards and lids. Secure the lid of the main access with the four lag screws and the lid of the secondary access with the two quarter turns. The secondary access lid and insulating board are packaged in the components box (shipped within the main access of the biofilter).



5.7 Connecting the water inlet pipe (demand dose configuration)

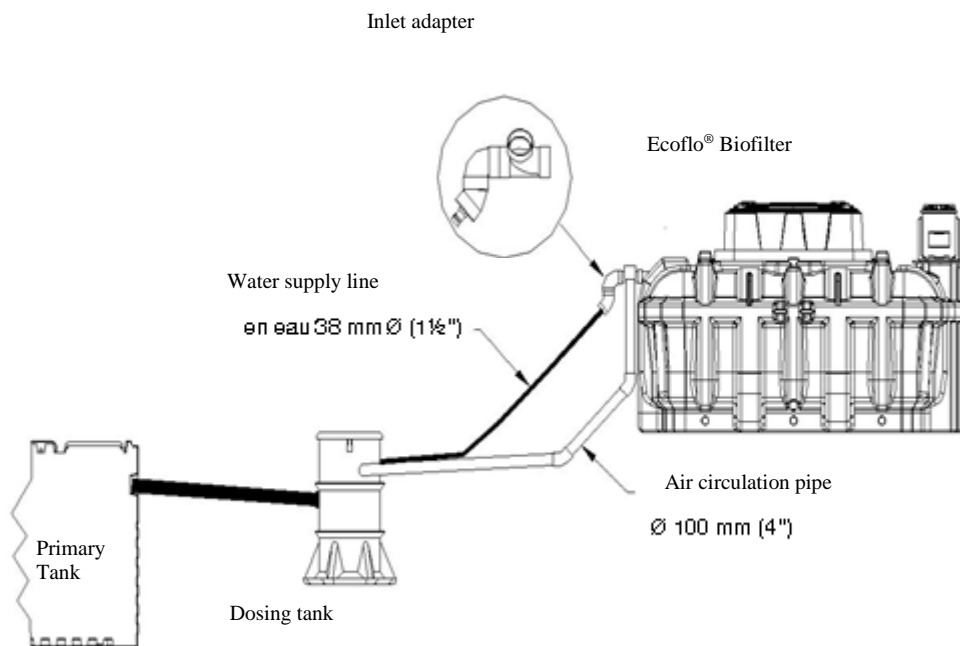
- Connect the supply line from the septic tank to the water intake of the Ecoflo® Biofilter, making sure that the entire length of the pipe is on a constant downwards slope that slants towards the Ecoflo® Biofilter. Note that the soil under the pipe must be properly compacted. The Ecoflo® Biofilter is equipped with a standard flexible intake adaptor. Use a regular pipe clamp to make the connection. Remove the protective cap before connecting the inlet pipe. Do not discard the documents wrapped under the cap: they must be handed over to the owner.



5.7.1 Connecting the water supply pipe when a pumping station is required to feed the Ecoflo® Biofilter (Time dosing configuration)

When a pumping station is required upstream of an Ecoflo® Biofilter, the following instructions must be taken into account:

- When a pumping station is required Premier Tech Aqua recommends sending approximately 30 to 40 L (8 to 10 US gallons) of wastewater to the Ecoflo® Biofilter every pump dosing cycle (10 tipping bucket events);
- The pumping station must be watertight (infiltration and exfiltration);
- The water supply pipe (flexible 38 mm (1½") Ø pipe) is connected to an inlet adapter which allows the connection to the Ecoflo® Biofilter's 100 mm (4") Ø inlet pipe. **Note that the adapter is mandatory to break the stream of water coming from the pumping station;**
- An air duct must connect the pumping station to the Ecoflo® Biofilter to ensure air circulation. This air duct is connected to the adapter, which is equipped with a tee-Y;
- Depending on site conditions, a forced air vent may be required;
- The pumping station must be accessible at all times.



When an installation consists either of two Ecoflo® Biofilters which cannot be fed by gravity or of three Ecoflo® Biofilters, a pumping station combined with a pressurized flow divider is required. Premier Tech Aqua offers several pressurized flow dividers. For more information on Premier Tech Aqua's pressurized flow divider, consult the Peripherals Section at ptzone.premiertechqua.com.

5.8 Connecting the pumped discharge (models with integrated pump)

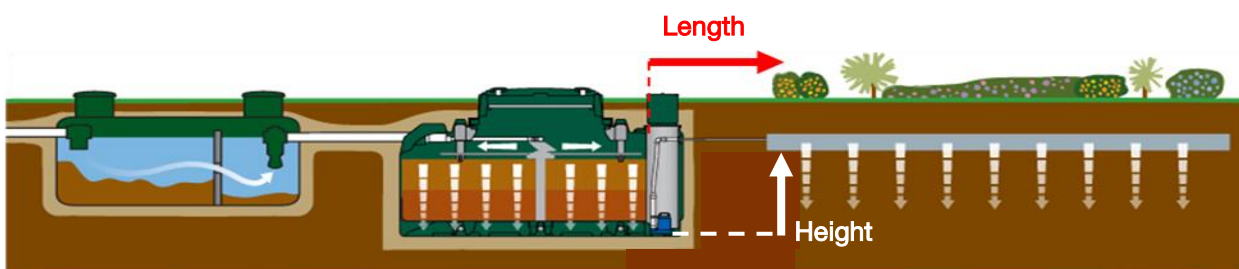
The effluent pipe from the integrated pump model must be connected to the treated effluent disposal method (absorption disposal, watercourse, etc.) using a flexible Ø 25 mm or 38 mm (1" or 1½") pipe. This pipe must be capable to withstand a minimal pressure of 700 kPa (100 PSI) and must also be compatible with underground applications. Now, there are two barbed Ø 25 mm (1") and Ø 38 mm couplings (**Item A**) links this flexible pipe to the biofilter's outlet (to choose the one which better adapts to your needs). If necessary, the other end of the pipe is connected to the pipes of the treated effluent disposal method via the coupling supplied for this purpose (**Item B**). Precautionary measures against freezing must be taken if the effluent is discharged into a watercourse. All the items can be found in the components box (shipped within the main access of the biofilter).



What you should know if you use PTA's integrated pump:

- The **maximum length of the pressurized pipe** (flexible pipe) from the pump's outlet, **using a 25 mm (1") Ø pipe**, depends on the head (difference in elevation between the base of the pump and the end of the pressurized pipe). The **maximum length of the pressurized pipe** (flexible pipe) from the pump's outlet, **using a 38 mm (1½") Ø pipe**, is limited by the volume of water that returns to the Ecoflo® Biofilter once the pump has stopped running. The following table presents the different allowable pipe lengths:

Head (height)	7,5 m (25')	6 m (20')	4,5 m (15')	3 m (10')	1,5 m (5')
Maximum length of the Ø 25 mm (1") pipe	---	18 m (60')	21 m (70')	24 m (80')	27 m (90')
Maximum length of the Ø 38 mm (1½") pipe	30 m (100')	30 m (100')	30 m (100')	30 m (100')	30 m (100')



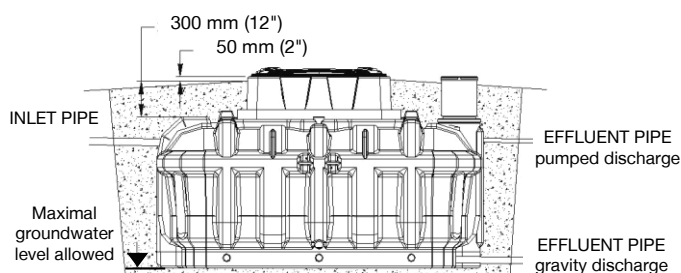
NOTE: The pipes must be installed in a way that they can drain properly.

WARNING: When there is a possibility of surface water accumulating on the lot, a drain pipe must be installed to evacuate the excess water and prevent any risk of infiltration.

5.9 Final backfill of the shell

Complete the backfill. The backfill material must be placed with care and not dumped (do not compact with bulldozer). The backfill material must be sandy with little or no rocks or stones. Allow space for ground cover and make sure the lids are at least 50 mm (2") above the surface of the landscaped lot.

Before the final backfill of the model with integrated pump, do not forget the electrical wiring (consult next section of the guide).



5.10 Pump verification and electrical wiring (models with integrated pump)

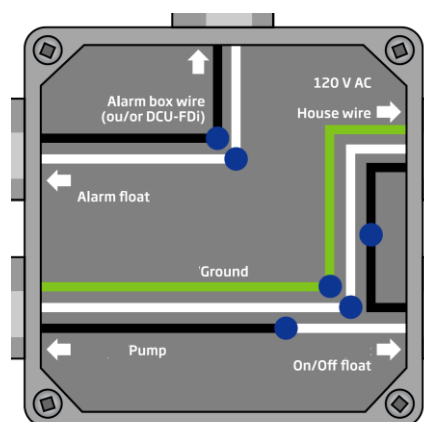
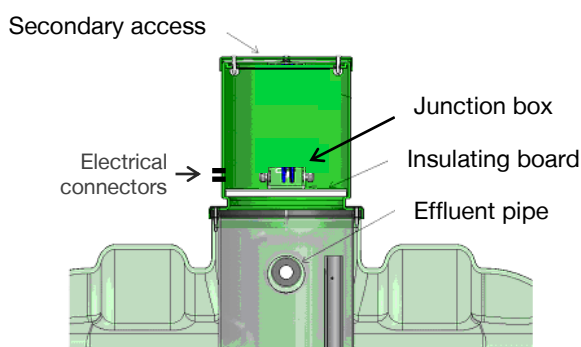
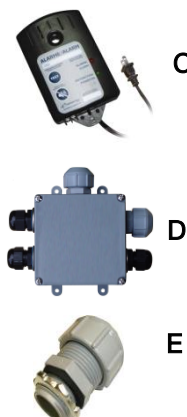
Step 1 Pump verification

Make sure there is no debris (sand, stone, gravel, tie-wrap, electrical components, tape, etc.) in the access well when the electrical wiring is complete. Visually inspect the components inside the access well (float tree, floats, pump) to make sure they are properly installed and will work as they should.

Step 2 Electrical wiring

The electrical wiring should be executed by an electrician. To wire the system to the residence, two (2) in-ground double strand supply cables are required. It is preferable to protect the wires with the appropriate piping before burying them. The wire rating must also be done by an electrician. One of the wires will be used for the power supply line while the other one will send the alarm float signal to the alarm box (**Item C**) or control panel (when required).

Waterproof electrical connectors (**Item E**) must be used to go through the secondary access.



IF YOUR LOCAL ELECTRIC CODE ALLOWS IT make the appropriate electrical connections using the supplied parts (junction box (**Item D**), waterproof screw-thread wire connectors and electrical connectors (**Item E**)) located in the components box. First, remove the connector plugs from the float and pump wires by cutting 5 cm (2") from the end. Make 2 holes of 2 cm (13/16") in diameter in one side of the secondary access well to pass the connectors through to the other side. Insert the wiring into the system through the 2 holes. The junction box is located in the secondary access on the insulating board. Identify and insert the wires into the junction box as shown in the diagram above. Use waterproof screw-thread wire connectors for the connections to ensure the water does not affect the electrical circuit. Follow the diagram's colour code. Since the white wire of the On/Off float is connected to the pump's black wire (live wire), wrapping the white wire in electrical tape is strongly recommended. Close the junction box. Pass the electrical wires from the pumping unit through the groove in the insulating board. Place the insulating board inside the access, install the junction box on top and close the lid of the secondary access.

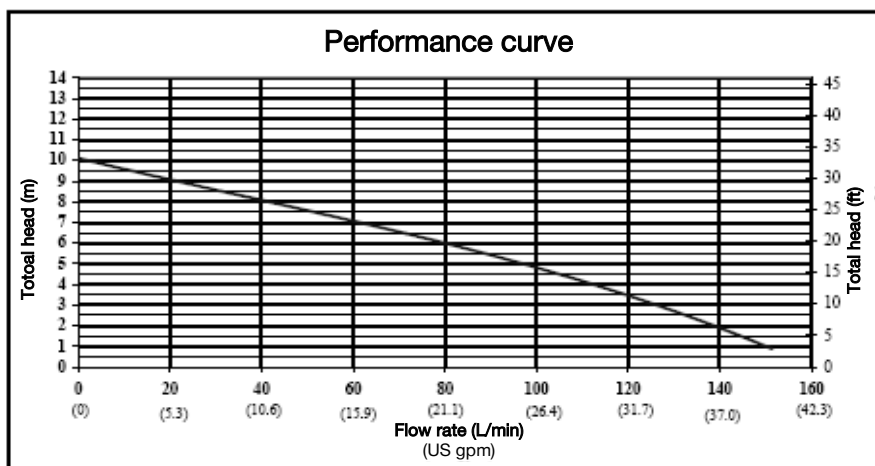
NOTE: Use two (2) separate circuit-breakers, one for the electrical power of the pump and the other for the alarm box connection. Do not connect anything else on these circuit-breakers (for example: household appliance). They must be used for the pump and the alarm box only.

The pumping unit uses 0.25 kWh per day.

The figure on the right represents the performance curve of the pump supplied with the Ecoflo® Biofilter with integrated pump. Note that this curve was obtained with clear water, the pump might not perform as well with wastewater. If you have questions about the interpretation of this curve, please do not hesitate to contact Premier Tech Aqua.

Pump characteristics:

- 0.4 HP
- 6.6 Amps
- 1 phase, 60 Hz, 115 V



5.11 System operation verification and warranty seals

The installed system is certified under **CAN/BNQ 3680-600 (2009)** and correspond to a B-IV treatment class.



After making sure the tipping bucket is fully operational and that the distribution plates are installed properly, install the insulating board inside the main access. Seal it shut by attaching the handle of the insulating board to the access of the **Ecoflo® Biofilter** using the two plastic fasteners. Finally, close the lid of the **Ecoflo® Biofilter**.

Note that the owner does not have to do anything in particular to start the system.

Do not forget the inspection permit, where applicable.

CHECK POINTS FOLLOWING INSTALLATION:

- ☐ NEVER cover or bury the lids of your septic system with mulch, soil or a permanent structure. Always keep the lids accessible.
- ☐ The lids of your septic system must be at least 50 mm (2") above the surface of the landscaped lot.
- ☐ **NEVER install a riser on the access of a polyethylene Ecoflo® Biofilter.**
- ☐ NEVER plant a tree within 6 m (20') of the Ecoflo® Biofilter lid and within 2 m (6.5') of the absorption bed.
- ☐ NEVER open the lids or go inside the septic tank or biofilter.
- ☐ NEVER connect a drain pipe, roof gutter, sump pump or air conditioning drain to your septic system.
- ☐ NEVER operate a vehicle or place objects weighing over 225 kg (500 lbs) within 4 m (13'.1") of the lid. Pass on this information to all those who have access to your system (landscaper, snow blower, etc.).
- ☐ NEVER let anything accumulate on top of your septic system (for example: compacted snow). The overload could damage the system.
- ☐ NEVER empty the backwash of a spa or pool into your septic system.
- ☐ NEVER empty wastewater of a recreational vehicle (camping trailer, caravan, etc.) into your septic system.
- ☐ NEVER use automatic toilet cleaners.
- ☐ If there is a delay in finishing the landscape after the initial installation of the system, place reference posts and protective fences to identify the location of the Ecoflo® Biofilter. This will prevent any circulation on the unit and help indicate the system's final level.
- ☐ If a pumping station is installed upstream of the Ecoflo® Biofilter, an airflow duct must be connected from the pumping station to the Ecoflo® Biofilter.
- ☐ Households must be equipped with an air vent that is in proper working condition and complies with the applicable standards. Premier Tech Aqua strongly recommends using a 100 mm (4") Ø pipe.
- ☐ Hand over the package containing the Owner's Manual and the Maintenance Agreement to the customer. This package is located inside the water intake protective cap.
- ☐ Remind the customer to fill out and sign the Maintenance Agreement. The customer must keep the white copy, give the yellow copy to the local regulatory body and send the pink copy to Premier Tech Aqua.

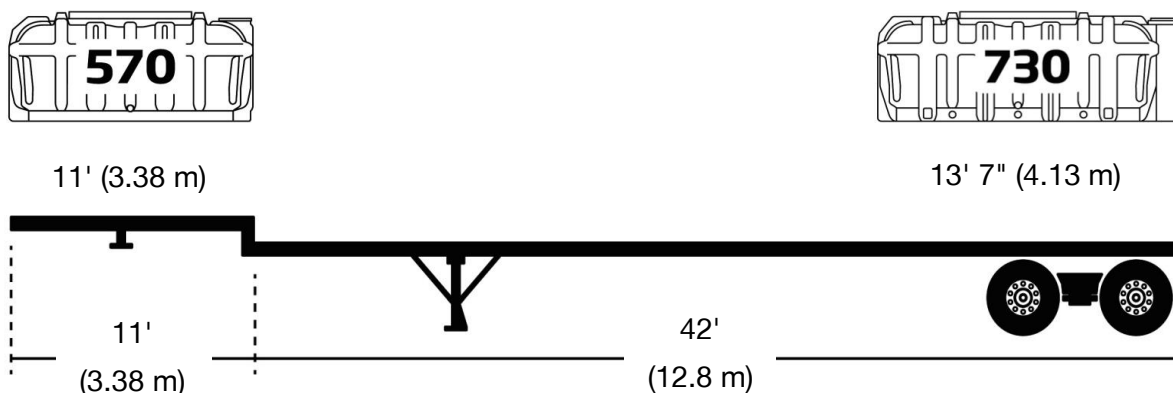
By respecting these guidelines, you are contributing to the proper operation of your wastewater treatment system. Failure to abide by these guidelines may, at Premier Tech Aqua's discretion, render the warranty invalid.

**If you have any problems, questions or comments, do not hesitate
to contact Premier Tech Aqua at 1 800 632-6356.**

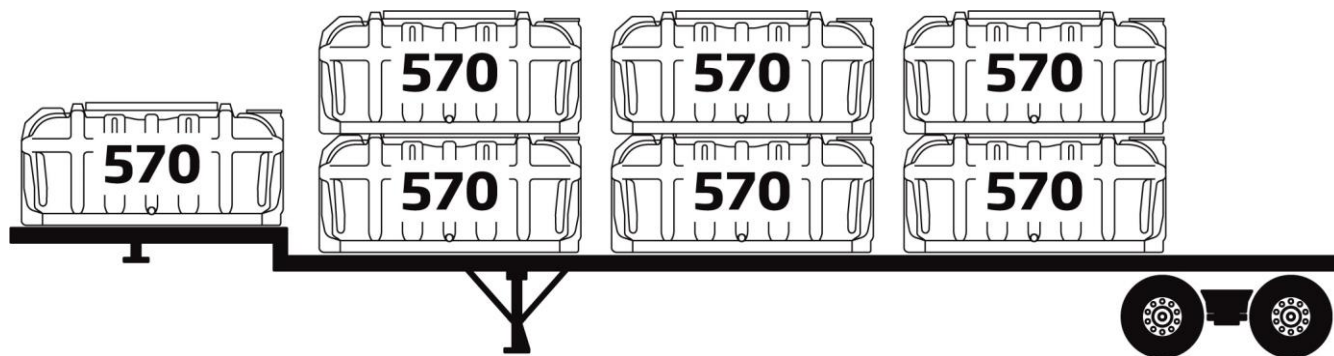
6. Shipping and Handling

6.1 Shipping Polyethylene Ecoflo® Biofilters from the manufacturer to the distributor

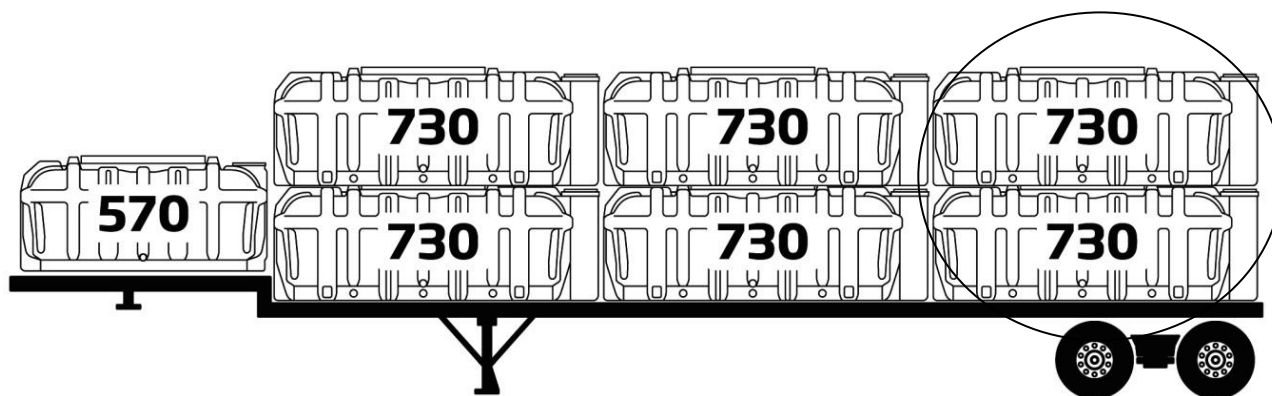
The load may vary depending on the type of trailer used. However, in order to maximize transportation, use a 53 ft drop-deck type trailer. The following image represents an example of the 570 series mounted on a drop-deck.



Length of 2 different Ecoflo® Polyethylene models and a low bed trailer

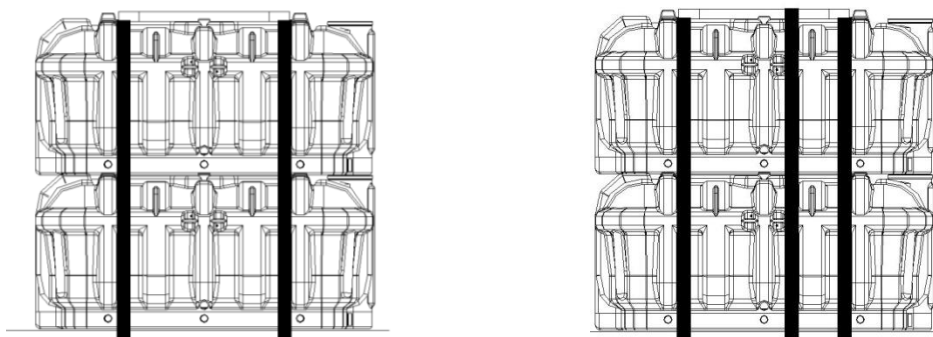


Typical configuration for 570 models



Typical configuration for 730 models

- Use two (2) straps per system or group of two (2) superposed systems.
- Use three (3) straps per system or group of two (2) superposed systems for the biofilters installed at the rear end of the trailer.
- Always position the straps according to the illustrations below.



- The systems must rest on a flat surface, free of any debris that can puncture or damage them.
- The carrier is responsible for complying with all laws and codes in effect.
- The carrier is responsible for any damage caused to the system occurring during shipment.

6.2 Shipping Polyethylene Ecoflo® Biofilters from the distributor to the installation site

- Use a trailer or vehicle with adequate loading space depending on the dimensions of the system.
- Use appropriate straps to support the systems properly and securely.
- The systems must rest on a flat surface, free of any debris that can puncture or damage them.
- The carrier is responsible for complying with all laws and codes in effect.
- The carrier is responsible for any damage caused to the system occurring during shipment.

6.3 Handling

6.3.1. Standard handling method

- Lifting rings should always be used unless a significant amount of water has infiltrated the system. In this case, refer to Section 3.2: *Handling systems in which water has infiltrated*.



- Lifting rings should always be used with lifting straps or shackles of appropriate size and capacity.

6.4 Handling systems in which water has infiltrated

If water has infiltrated the system during storage, it must be pumped out (refer to Section 5: *Pumping Procedure*). Lifting chains must be properly secured on the protruding galvanized pipes.



- Make sure the chains or lifting straps used to move the system are strong enough to withstand the water's additional weight. Even if the excess water is emptied from the shell, water absorbed by the filtering media still remains, please handle with care.
- Use equipment with adequate lifting capacity to handle the system. As specified above, the actual weight to be handled and the dry weight indicated on the first page of this document may differ significantly due to the amount of water in the system.

For both handling methods

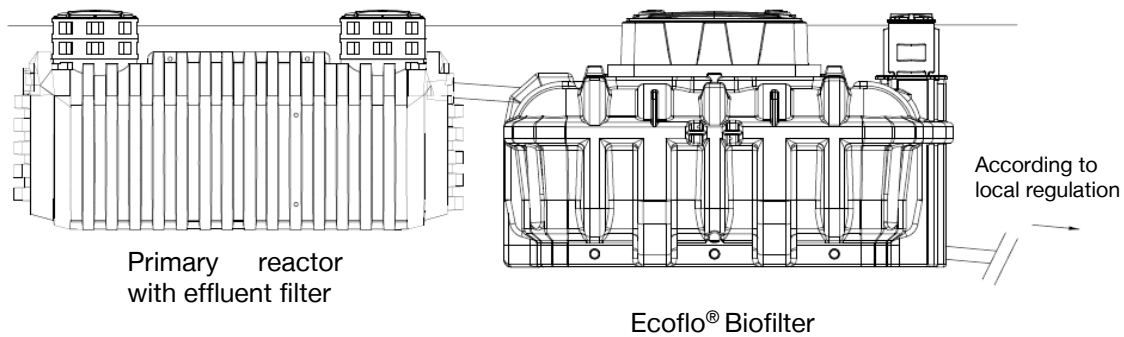
- Always support the system with four (4) lifting points. Make sure the load is evenly distributed on the four (4) lifting points (lifting rings, galvanized pipes, etc).
- When handling the system, always keep it levelled to avoid movement of the components inside the shell.
- Carefully move the system making sure everyone keeps a safe distance from the system as well as the equipment on site.
- Handle the system gently and uniformly, sudden movements should be avoided.
- The handler is responsible for any damage caused to the system occurring while handling.
- Never handle more than one system at a time.

7. Typical Installations

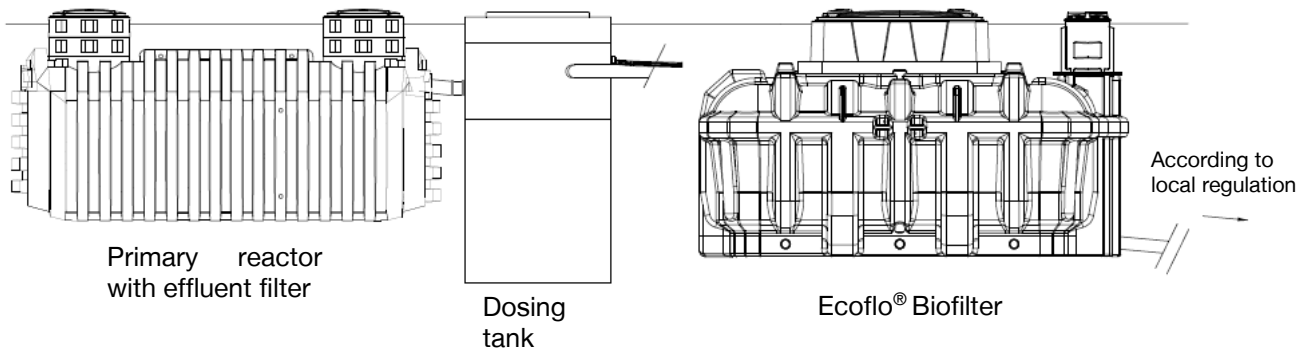
The type of installation varies according to the conditions encountered in the field. Here are different types of installations:

Type 1 – Flat site with gravity discharge

Demand dosed : Gravity feeding of the Ecoflo®

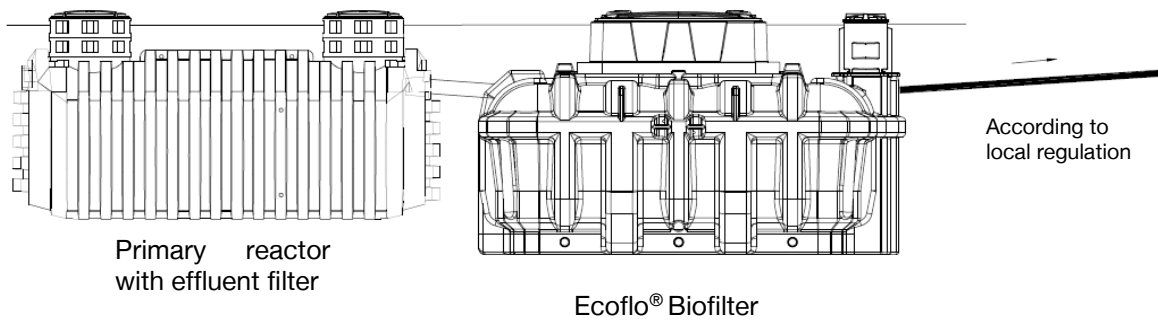


Time dosed : On demand feeding of the Ecoflo®

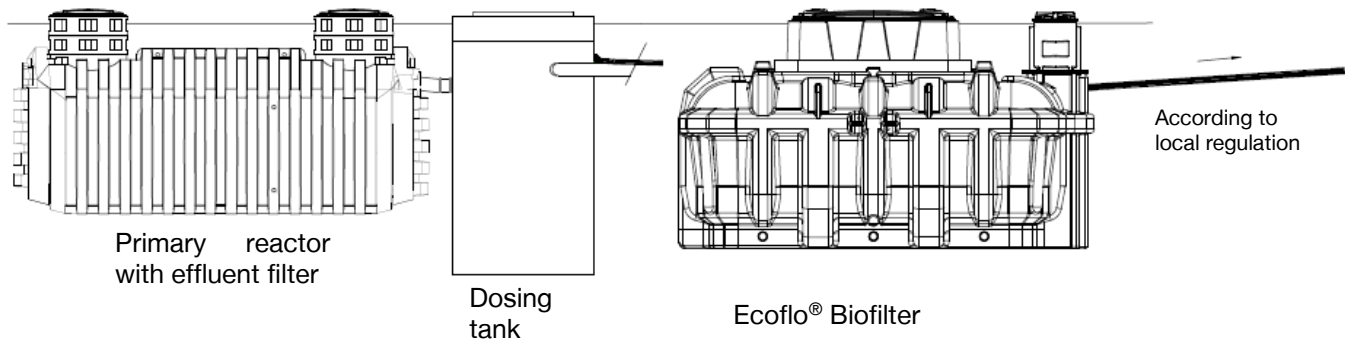


Type 2 : Flat site with pumped discharge

Demand dosed : Gravity feeding of the Ecoflo®



Time dosed : On demand feeding of the Ecoflo



If you have any questions or comments, do not hesitate to contact Premier Tech Aqua at 1 800 632-6356.



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