Ecoflo® Septic system

For illustration purposes only

Reference guide for the wastewater treatment professional

Consistent performance under all conditions

This highly effective system provides complete protection regardless of water quality and lifestyle (flow intensity, seasonal activities, and zero-flow periods).

Permanent and definitive solution

Unlike conventional systems, no new excavation or relocation is required after 10 years since all components can be accessed through the lid.

Energy savings

The treatment does not require any electrical power for the treatment process.

Compact and versatile installation

The installation can require up to three (3) times less space than conventional systems, providing optimal performance on small or problem sites.

PREMIER TECH AQUA

Canada
United States

Ecoflo®

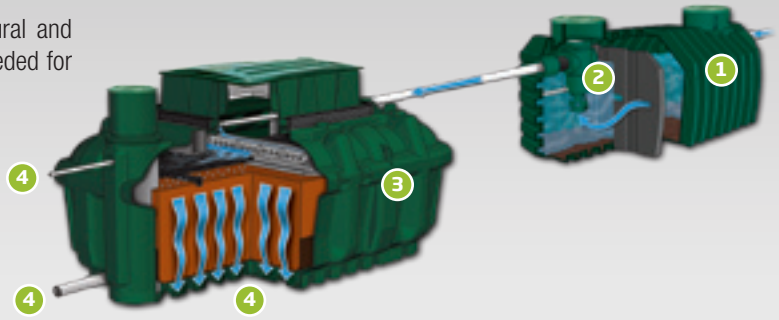
A solution adapted to today's lifestyles

Renowned & proven
50 000 INSTALLATIONS
in twenty (20) States and six (6) provinces in North America
Renowned & proven

Today's lifestyles have a major impact on a home's wastewater production (water and flow variations, intermittent use and zero-flow periods). The Ecoflo® provides the best wastewater treatment performance and greatest stability under all conditions, thanks to its patented filtering media. This media retains water allowing survival of microorganisms involved in biological domestic wastewater treatment even after long periods of zero-flow, ensuring high performance immediately after restart. It is a true physical barrier between the existing soil and the absorption bed.

Sustainable performance and zero energy to treat wastewater

The Ecoflo® is a passive system that uses a patented, natural and organic filter medium to treat wastewater. No electricity is needed for the treatment.



1 Septic tank
The septic tank collects wastewater and retains solids.

2 Effluent filter
It prevents gross particles from entering the Ecoflo®.

3 Ecoflo® shell and filter
Pretreated waters are directed towards the shell and are then distributed over the entire surface of the Ecoflo® filter, thanks to a gravitational distribution system consisting of a tipping bucket and distribution plates. The water is then purified through the filter, which ensures a biological treatment in addition to retaining pollutants.

4 Disposal of the wastewater
Once it has been 99% treated, the water infiltrates the ground through a crushed stone bed, a layer of sand on natural soil located beneath or near the Ecoflo®.

A promise kept

Our 20 years of Innovation, Research and Treatment have resulted in the design, marketing and continuous improvement of the best onsite wastewater treatment with regards to performance, flexibility and reliability for homeowners, small communities and small businesses. We can make this statement because of the various onsite "controls" we have implemented. Today, 75% of all installed filters have performed optimally for more than 10 years!

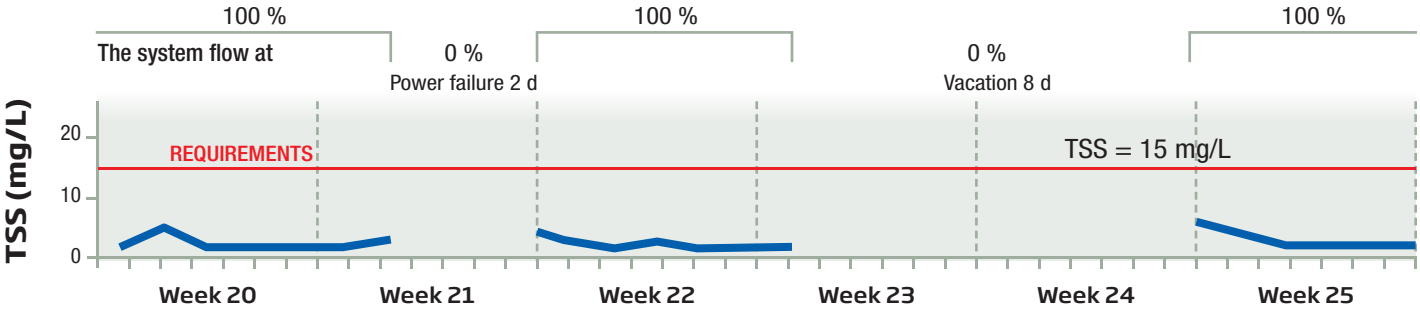
The importance of third-party field monitoring

Extensively tested both in North America and Europe* by third party entities over the past ten (10) years, the Ecoflo® is proving to be the very best. Results are proof of its high performance and reliability under all test conditions. The quality of the effluent exceeded standards every time. Our unique filtering media acts like a sponge that ensures the same stable performance in the field as on the test platforms.

Treatment performance obtained on BNQ and NSF test platforms

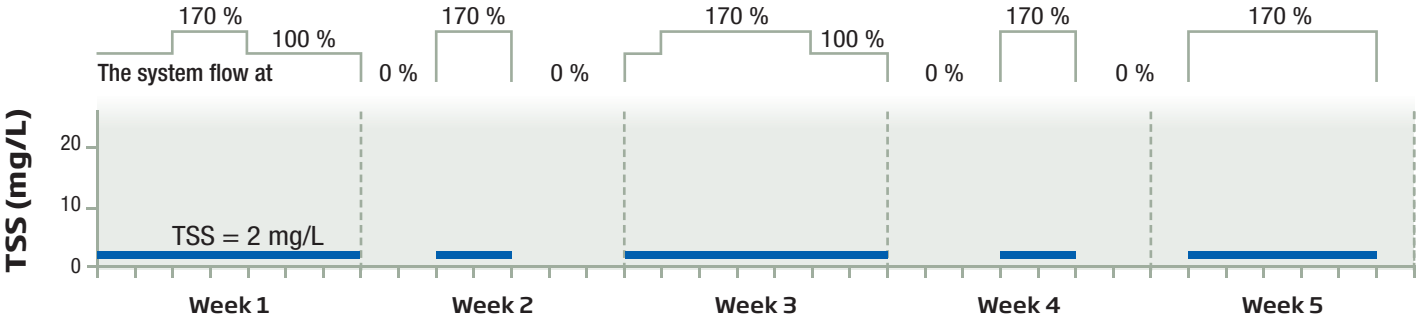
Site	TSS	$CBOD_5$	FC
BNQ	2 mg/L	2 mg/L	1 250 CFU/100 mL
NSF	2 mg/L	2 mg/L	978 CFU/100 mL

Certification under NQ 3680-910 Standard – Results under stress conditions



NSF testing platform performed to simulate peak flow and intermittent occupation (secondary home) – Additional testing

Ecoflo® has been tested on the NSF testing platform (after completion of the 26-week standard testing period) in particular stress test conditions simulating vacation house rentals or secondary homes used mainly on weekends.



*Testing performed over a period of five weeks (13/03/2005 to 16/04/2005). As illustrated, the testing protocol included a high daily flow (170% x design flow) and simulated weekend peak flow conditions (2 or 3 days at zero-flow before 2 days at peak flow).

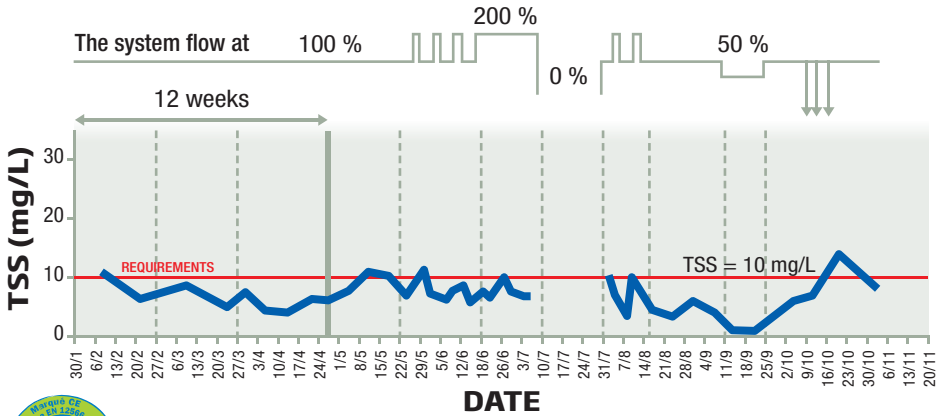
Treatment performance after more than 500 days of testing!

Site	TSS	$CBOD_5$	FC
BNQ annual audits [1]	3 mg/L	5 mg/L	627 CFU/100 mL
Municipality of St-Joseph de Kamouraska [2]	5 mg/L	5 mg/L	9 950 CFU/100 mL
PTA's voluntary sampling program [3]	4 mg/L	6 mg/L	1 296 CFU/100 mL
EPA demonstration study [4]	4 mg/L	5 mg/L	1 571 CFU/100 mL
North Carolina field monitoring program [5]	6 mg/L	4 mg/L	413 CFU/100 mL
Virginia study [6]	6 mg/L	8 mg/L	1 029 CFU/100 mL

1. Annual audits performed from 2006 to 2010 on 73 different sites according to NQ 3680-910 Standard – Average of 73 results for TSS and BOD_5 and geometric average of 33 results for fecal coliforms
2. Ongoing follow-up started in November 2002 on 80 Ecoflo® Biofilters in 5 clusters servicing 80 homes. Average results obtained over the 95 sampling days done by the municipality
3. Premier Tech Aqua's voluntary sampling program performed from 1995 to 2006 on 140 different residential sites located in the United States, Ontario and Québec - Average of 244 results for TSS, 188 results for BOD_5 and geometric average of 223 results for fecal coliforms
4. EPA demonstration study over a 3-year period, from 2005 to 2007, on one site located in Syracuse. New York – Average of 43 results for TSS and BOD_5 and geometric average of 32 results for fecal coliforms.
5. Third party monitoring conducted by Pace Environmental and TetraTech Inc. on 30 different sites – Average of 30 results for TSS and BOD_5 and geometric average of 90 results for fecal coliforms.
6. Third party study conducted in Virginia by Dr. A. Robert Rubin, P.E., Ph.D. on 20 sites over an 18-month period – Average of 337 results for TSS and BOD_5 and geometric average of 308 results for fecal coliforms

Results obtained on European test platforms

New protocol simulating today's lifestyles (variable flow, zero-flow, overload, intermittent use, power or equipment failure, etc.). The Ecoflo® proved to be very stable under all test conditions. The system's best results were obtained during comparative tests done in France and Germany. The system successfully passed all required EN Standard 12566-3 tests and is now authorized in France for all usage conditions, including intermittent use (ex: secondary home). **Suspended or Fixed growth aerobic treatment units are not allowed in France for intermittent use**.



Ecoflo®

Polyethylene • Ready to install

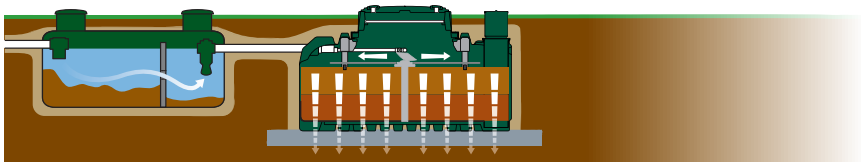
Ready to install
Ensures fast and high-quality work

Robust and lightweight
Easy to handle, even in small spaces

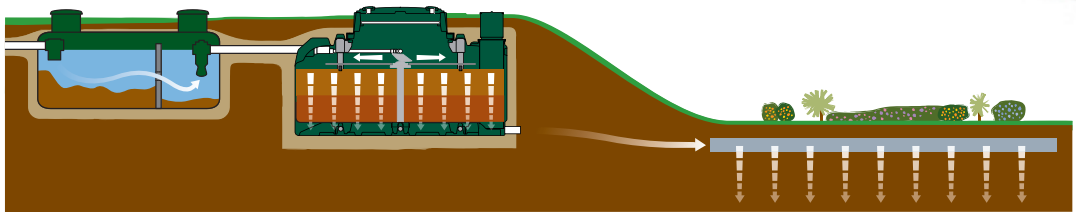
Minimal final footprint
Allows for more enjoyment of the property

Integrated pump vault
Reduces work during installation

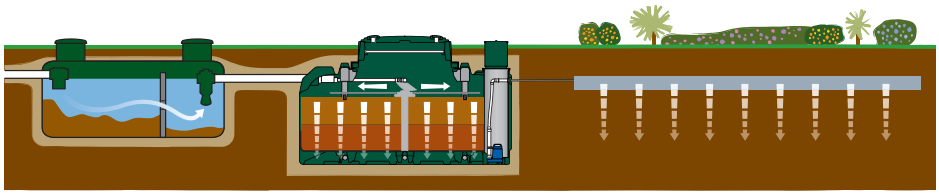
Examples of installations



Polyethylene Ecoflo® - no bottom (ST-570P) - infiltration discharge



Polyethylene Ecoflo® - with bottom (STB-570P) - gravity discharge

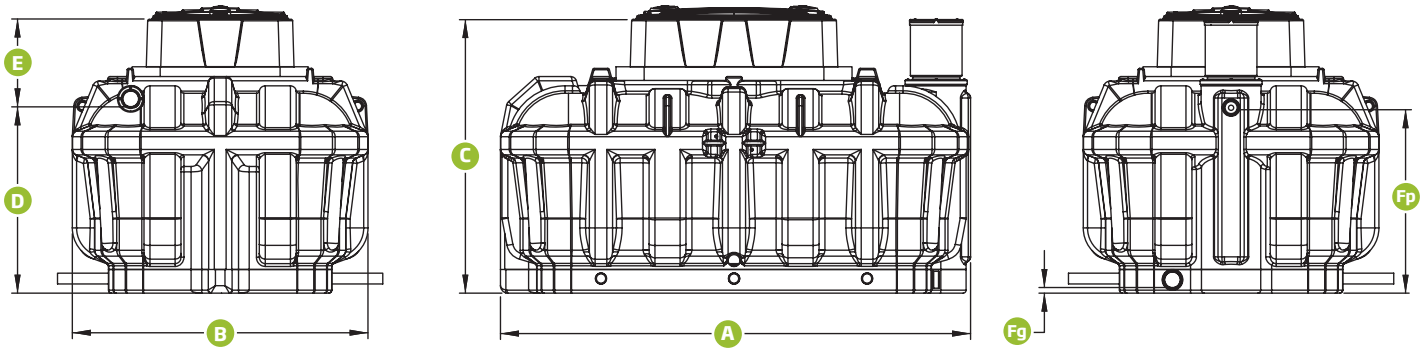


Polyethylene Ecoflo® - with bottom and pump station (STB-570PR) – pumped discharge

For installation in groundwater: consult with your local PTA regional coordinator

Technical data

MODELS	ST-570P	STB-570P	STB-570PR
Type of disposal	infiltration	gravity	pumped
Type of bottom	perforated	watertight	watertight
Lenght (A)	10' 5" (3 180 mm)	10' 5" (3 180 mm)	10' 5" (3 180 mm)
Width (B)	6' 7" (2 000 mm)	6' 7" (2 000 mm)	6' 7" (2 000 mm)
Height (C)	5' 11" (1 800 mm)	6' 1" (1 850 mm)	6' 1" (1 850 mm)
Inlet height (D)	4' (1 210 mm)	4' 2" (1 260 mm)	4' 2" (1 260 mm)
Inlet height (E)	1' 11' (590 mm)	1' 11' (590 mm)	1' 11' (590 mm)
Outlet height (Fg et Fp)	—	1,5" (38 mm)	4' 1" (1 240 mm)
Weight (including internal components and filtering media)	2 460 lb (1 120 kg)	2 620 lb (1 190 kg)	2 640 lb (1 200 kg)
Dosing volume	—	—	38 US gal (145 L)
Retention volume	130 US gal (500 L) – between bottom of tank and under the filtering media		



Ecoflo®
Concrete

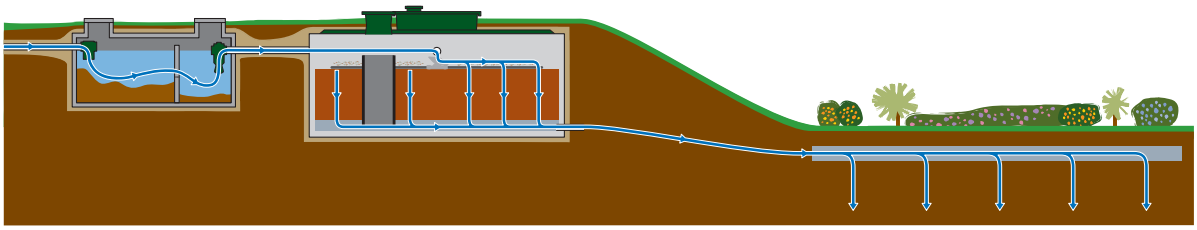
Robust
Suitable for all soil types and site conditions

Easy to install
Ensures a problem-free installation

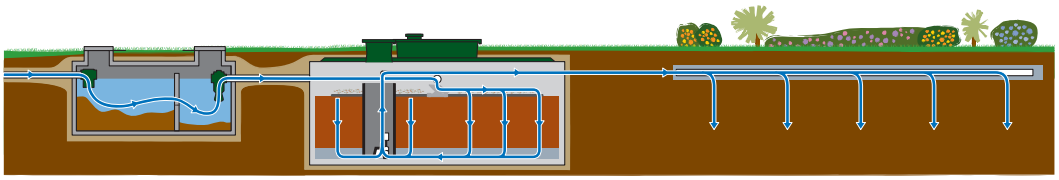
Local manufacturing
Creates local jobs and minimizes shipping costs

All-in-one
Integrated pump vault – reduces work during installation

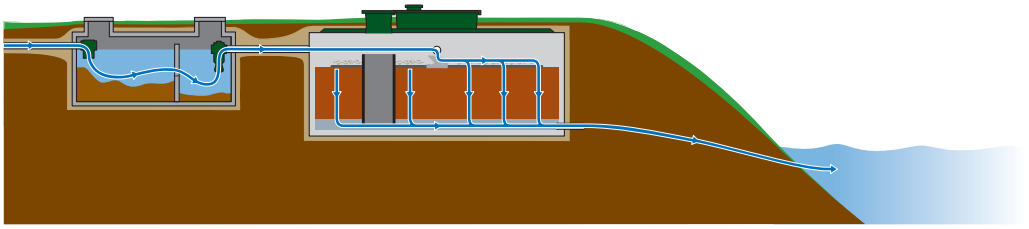
Examples of installations



Concrete Ecoflo® – gravity outlet (STB-650B H1-H2-H3) – gravity discharge



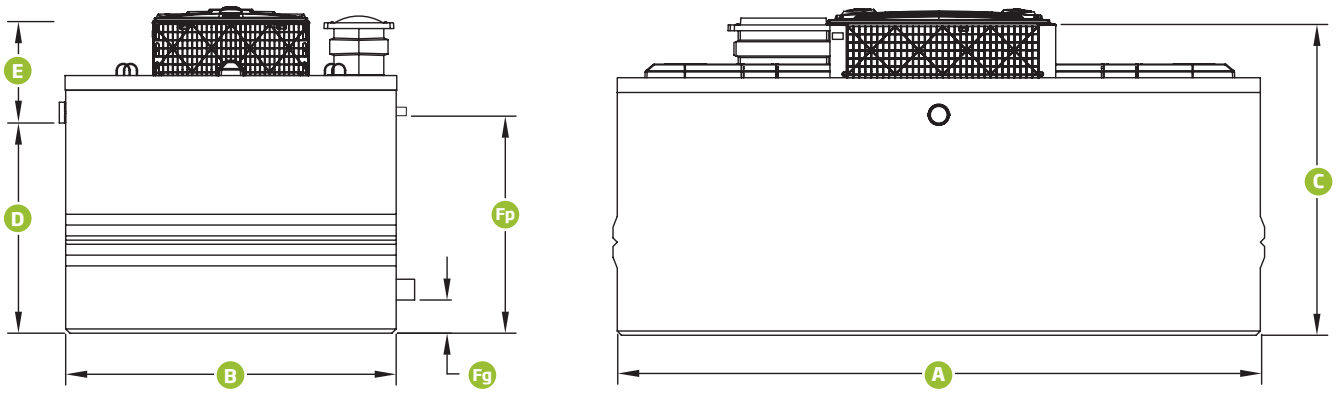
Concrete Ecoflo® – integrated pump (STB-650BR H1-H2-H3) – pumped discharge



Concrete Ecoflo® – integrated pump (STB-650BR H1-H2-H3) – pumped discharge to a watercourse (when permitted by local ragulation)

Technical data

MODELS	STB-650B-H1	STB-650BR-H1	STB-650B-H2	STB-650BR-H2	STB-650B-H3	STB-650BR-H3
Type of disposal	gravity	pumped	gravity	pumped	gravity	pumped
Type of bottom	watertight	watertight	watertight	watertight	watertight	watertight
Lenght (A)	12' 7" (3 835 mm)	12' 7" (3 835 mm)	12' 7" (3 835 mm)	12' 7" (3 835 mm)	12' 8" (3 860 mm)	12' 8" (3 860 mm)
Width (B)	6' 10" (2 075 mm)	6' 10" (2 075 mm)	6' 10" (2 075 mm)	6' 10" (2 075 mm)	6' 11" (2 100 mm)	6' 11" (2 100 mm)
Height (C)	6' 1" (1 850 mm)	6' 1" (1 850 mm)	6' 8" (2 035 mm)	6' 8" (2 035 mm)	7' 8" (2 330 mm)	7' 8" (2 330 mm)
Inlet height (D)	4' 1" (1 245 mm)	4' 1" (1 245 mm)	4' 8" (1 425 mm)	4' 8" (1 425 mm)	5' 8" (1 725 mm)	5' 8" (1 725 mm)
Inlet height (E)	2' (600 mm)	2' (600 mm)	2' (600 mm)	2' (600 mm)	2' (600 mm)	2' (600 mm)
Outlet height (Fg et Fp)	6" (150 mm)	4' 5" (1 335 mm)	6" (150 mm)	4' 11" (1 493 mm)	6" (150 mm)	5' 10" (1 790 mm)
Weight (tank and slab)	14 000 lb (6 360 kg)	14 000 lb (6 360 kg)	15 800 lb (7 180 kg)	15 800 lb (7 180 kg)	20 350 lb (9 250 kg)	20 350 lb (9 250 kg)
Dosing volume	—	30 US gal (120 L)	—	up to 220 US gal (830 L)	—	up to 250 US gal (945 L)
Retention volume	160 US gal (600 L) between bottom of tank and under the filtering media		435 US gal (1 645 L) between bottom of tank and under the filtering media		900 US gal (3 405 L) between bottom of tank and under the filtering media	



Ecoflo®
Fiberglass

Minimal final footprint
Fast and high quality work ensured

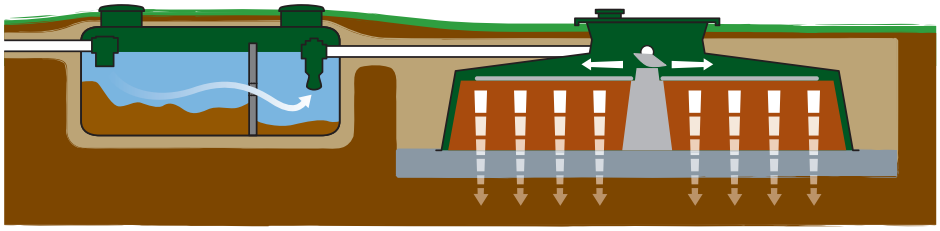
Lightweight and easy to handle

On-site assembly

Ideal in good soil conditions
Ensures easy installation

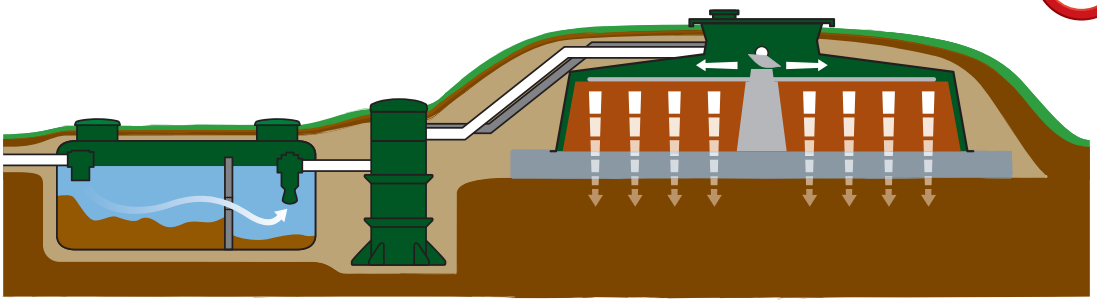
Recommended for remote locations

Examples of installations



Fiberglass Ecoflo® with open bottom (ST-500/650/750) – infiltration discharge

Do not install in groundwater

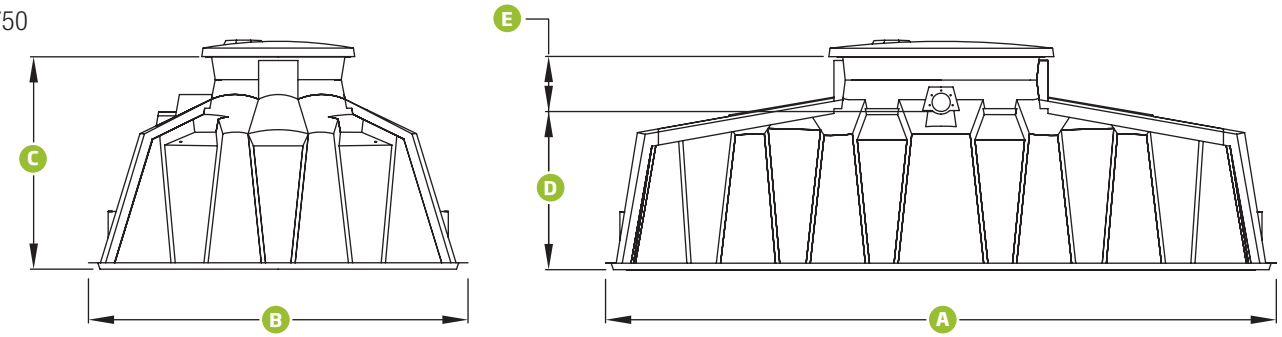


Fiberglass Ecoflo® with open bottom, above ground (ST-500/650/750) – infiltration discharge

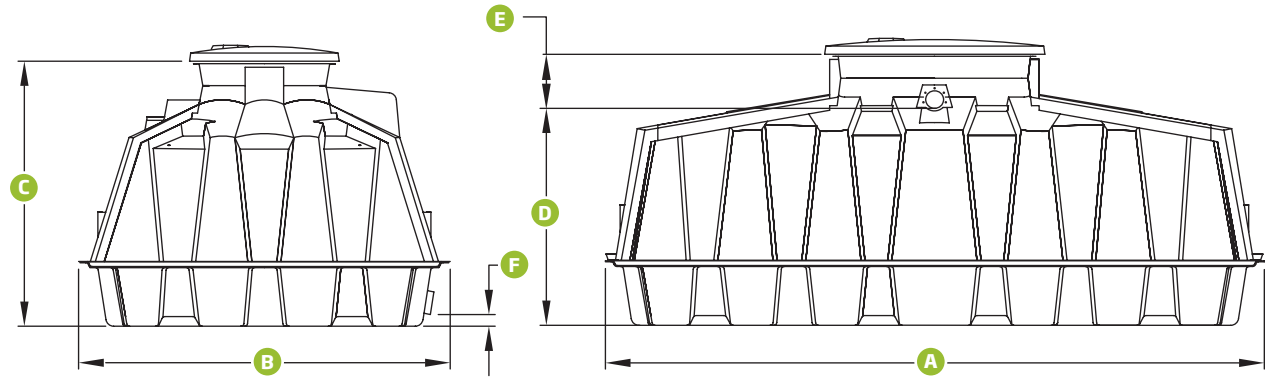
Technical data

MODELS	ST-500	STB-500	ST-650	STB-650	ST-750
Type of disposal	infiltration	gravity	infiltration	gravity	infiltration
Type of bottom	open	watertight	open	watertight	open
Lenght (A)	11’ (3 345 mm)	11’ (3 345 mm)	13’ 8” (4 175 mm)	13’ 9” (4 189 mm)	15’ 4” (4 675 mm)
Width (B)	7’ 9” (2 361 mm)	8’ 1” (2 465 mm)	7’ 9” (2 361 mm)	8’ 1” (2 465 mm)	7’ 9” (2 361 mm)
Height (C)	4’ 4” (1 320 mm)	5’ 7” (1 700 mm)	4’ 4” (1 320 mm)	5’ 7” (1 700 mm)	4’ 4” (1 320 mm)
Inlet height (D)	3’ 2” (970 mm)	4’ 5” (1 345 mm)	3’ 2” (970 mm)	4’ 5” (1 345 mm)	3’ 2” (970 mm)
Inlet height (E)	1’ 2’’ (350 mm)	1’ 2” (355 mm)	1’ 2’’ (350 mm)	1’ 2” (355 mm)	1’ 2” (350 mm)
Outlet height (F)	—	4” (100 mm)	—	4” (100 mm)	—
Weight	230 lb (105 kg)	460 lb (210 kg)	275 lb (125 kg)	550 lb (250 kg)	320 lb (145 kg)

ST-500/650/750



STB-500/650



Disinfection

Disinfection Unit

DiUV

Self-cleaning

with CROSSFIRE® TECHNOLOGY

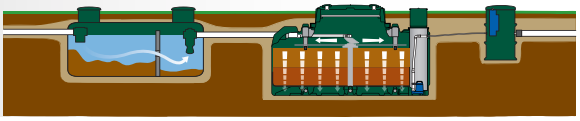
Compact
A completely prefabricated unit, ensuring a quick installation

Compatible
Can be adapted to most advanced secondary wastewater treatment systems

Reliable
Over 2 000 cleanings a year guaranteed

Low maintenance
Easy access simplifies maintenance and replacement of the UV lamps

Weight: 38,5 kg / 85 lb



Treatment system consisting of an Ecoflo® and a DiUV self-cleaning disinfection unit

Disinfection filter

FDi

Very low energy consumption
Reduces electricity bills

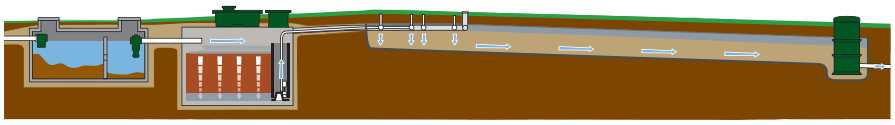
No maintenance
Requires yearly inspections only, as per local regulations

Reliable and durable

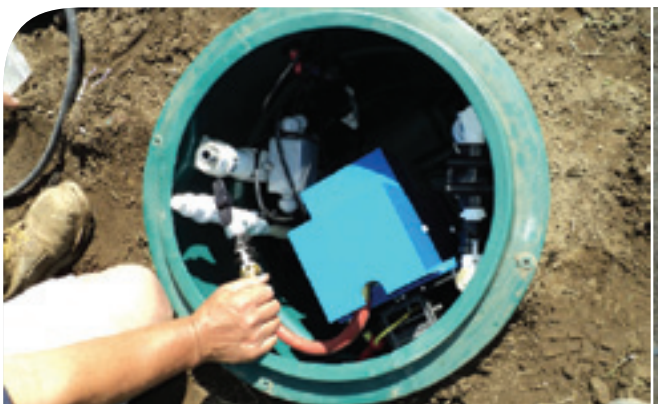
Performance

Site	TSS	$CBOD_5$	FC
BNQ	2 mg/L[1]	2 mg/L[1]	10 CFU/100 mL[2]

[1] Average of 120 results for TSS and $CBOD_5$
[2] Geometric mean of 415 results for fecal coliforms



Treatment system consisting of an Ecoflo® and an FDi disinfection filter



Septic tanks

Robust
Ensures no damage is done during the installation or the pumping operations

Flexible
Compatible with all onsite systems with an effluent filter

Reliable
20-year warranty against manufacturing defects

MODELS	PST-280	PST-340	PST-390	PST-420	PST-500	PST-660
Description	Septic tank with effluent filter (basic model includes a Polylok™ PL-122 effluent filter)					
Total nominal capacity	740 US gal (2 800 L)	900 US gal (3 400 L)	1 030 US gal (3 900 L)	1 140 US gal (4 300 L)	1 320 US gal (5 000 L)	1 760 US gal (6 650 L)
Liquid capacity	600 US gal (2 260 L)	800 US gal (3 000 L)	880 US gal (3 300 L)	950 US gal (3 600 L)	1 140 US gal (4 300 L)	1 530 US gal (5 800 L)
Certifications	[1]	[1]	[1]	[1]	[1]	[1]

[1] Accredited according to the CAN/CSA-B66-05 standard

* Accredited by Health Products and Food Branch (Health Canada) for some application.

Pumping stations

Preassembled
Ready to install

Robust
Eliminates damage during installation or pumping operations

Easy access
Internal components are easy and safe to handle

MODELS	PSA-240	PSA-240L	PSA-240H	PSA-240NP	PSX-240
Pump	ABS, 0.3 HP, 120 V	ABS, 0.3 HP, 120 V	ABS, 0.4 HP, 120 V	———	———
Float	Pump switch on/off and alarm switch	Pump switch on/off and alarm switch	Double pump switch and alarm switch	Pump switch on/off and alarm switch	———

Prevention through maintenance!

A well-designed, properly installed and annually maintained septic system ensures the long-lasting performance of the wastewater treatment and also complies with relevant standards. This translates into substantial savings in the future and better protects the user's investment and the environment.

Annual Ecoflo® biofilter maintenance program

Year after year, this program ensures the follow-up of every registered Ecoflo® system. The maintenance visits take place on an annual basis for the life of the system. As well, the maintenance of the system ensures that the septic system's warranty remains valid.

Users

A network of local partners undertakes the annual maintenance visits. As well, onsite information collection ensures that, from the site itself, all relevant information is entered into a database.

Commercial or community installations (islanding)

A team of certified technicians ensures the start-up and validates the proper functioning of the equipment (control panel, flow divider, pump, etc.). This team also suggests an environmental follow-up of the Ecoflo® Biofilters and the equipment upstream and downstream from the system itself.

pta-service@premiertech.com

ALL THAT YOU NEED!
The toolbox of wastewater professionals

Register

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