Envirolet®/Santerra Green Composting Toilet Systems Installation & Operation Manual

Please read this manual carefully before installation and follow all guidelines for proper system performance.

Sancor Contact information
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Envirolet®
USA & WORLD envirolet.com
CANADA envirolet.ca
EUROPE envirolet.eu
NORWAY enviroletnorge.com
FINLAND enviroletfinland.com

Manufactured by
Sancor Industries Ltd.
341 Marwood Drive
Oshawa, Ontario
L1H 7P8 Canada

Santerra Green™
santerragreen.com

Write down your system info here for future reference:

MODEL _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

7MINS11D

TABLE OF CONTENTS – Key areas are marked with a ★

Envirolet® and Santerra Green™

We manufacture advanced composting toilet systems under two brand names, Envirolet® and Santerra Green. They are the same systems. Throughout this manual we will refer to them as **Envirolet®/SG**.

Congratulations

Congratulations on your purchase of an Envirolet® or Santerra Green Composting Toilet System by Sancor™. You are now contributing to the restoration and protection of our environment.

Use as directed. To ensure proper performance, please be sure to contact us if you have installation or operation questions.

START HERE: Read Before Installation

This is where to start the installation process!

Read this section **before** installation of your Envirolet®/SG Composting Toilet System.

Look for These Symbols

Pay close attention to the ⚠ and ⚠ symbols used throughout this manual for **important** notes and **warnings**.

⚠ IMPORTANT! READ THIS ENTIRE SECTION BEFORE INSTALLATION

Learn About System

- It is essential to use proper care in the installation, operation and maintenance of your system.
- Educate other users to assist you in the proper use and up keep of your Envirolet®/SG system.
- Follow all instructions provided and your Envirolet®/SG Composting Toilet will provide carefree use for many years.
- Only refer to any “Quick Guides” (abbreviated versions) **after** fully understanding system installation and operation.

Contact Us for Assistance

- Be sure to contact us for any Envirolet®/SG technical support (installation, operation, etc.), service or product assistance. **It is better to get it right from the start!**
- Remember, a composting system works differently in many ways compared to a traditional flush-type toilet.

IMPORTANT INSTALLATION GUIDELINES

Please read and understand all of these basic installation guidelines **before** beginning the installation of your Envirolet®/SG Composting Toilet System. We have included a check box area to help you.

#	GUIDELINE	CHECK BOX ☑
1	**Inspect package** (box) contents immediately upon delivery of system to ensure that there are no missing or broken parts. Report any issues within 24 hours.	☐
2	**Follow all safety guidelines and Install & operate** your Envirolet®/SG Composting Toilet System **as directed**. Do not use "third party" parts or components in your systems installation (Exception: 4" rigid vent pipe (PVC) for Remote System venting and 3" rigid drain pipe (ABS) for Low Water Remote System draining).	☐
3	Envirolet®/SG Composting Toilet Systems are **only for blackwater** (toilet wastewater). **Do not add greywater** (sink, shower, kitchen water, etc.) to your system.	☐
4	Use within listed **capacity**. Over-use of system could result in performance issues. Refer to Rated Capacity Chart.	☐
5	Do not remove the **Paper Mat** located in Envirolet®/SG composting unit/tank component (under Rake). **This is not packing material.** It is an important component to proper system start-up.	☐
6	Do not use any **90° angles or bends** in your vent installation. This is extremely important rule to follow. 90° angles can create an impedance in the vent and slow down airflow and evaporation thus affecting the performance.  You will notice this **NO 90° BENDS** image throughout this manual.	☐
7	If your system has a **drain** (front-right near bottom) be sure to connect it to a proper holding container or drain site (check local regulations). **Ensure drain is gravity fed from the composting unit to the drain site.** All systems *except* waterless AC electric models (if operated with fans and heater as directed) require drains.	☐
8	If you are installing a 12VDC, 120VAC or 230VAC Electric system (with dual fans) be sure to **operate fans and heater** as directed even if you think it is not required. Systems with fans are designed to function and perform properly with the fans running. A static fan (not running) can cause an impedance in the vent line slowing evaporation.	☐
9	With Low Water Remote or FlushSmart VF Systems, be sure to **test water flush** from toilet **without** connecting drain to remote composting system to avoid system "flooding."	☐
10	Be sure to follow winter use guidelines (see Winter Use section) if you plan to use your system in the winter or during freezing or near freezing conditions. Remember, water freezes! Do not use chemicals to prevent freezing, as this will harm the composting process.	☐
11	The included Water Regulator (water supply) **must be** installed with FlushSmart VF Systems as this properly regulates water use in the toilet.	☐
12	**IMPORTANT IF USING A LOCAL INSTALLER:** If you are having your system installed by a plumber or contractor, please be sure they follow all directions and/or contact us for technical support. Envirolet®/SG Composting Toilet Systems install and operate much different than *traditional* sanitation systems.	☐

Use as directed. To ensure proper performance, please be sure to contact us if you have installation or operation questions.

SPECIAL NOTE FOR SYSTEM INSTALLERS, INCLUDING CONTRACTED INSTALLERS (PLUMBERS, CONTRACTORS, HANDYMEN/WOMEN, ETC.)

This is a composting toilet system and does not install in the same manner a standard flush toilet does. We use special venting and draining designed to work with our systems. Please pay careful attention to our instructions and contact us for assistance if required. An incorrectly installed system may have service/performance issues.

Special Notes

- Use only our included or specified venting/draining materials only.
- With FlushSmart VF models **only install with included Water Regulator (Supply).**
- Do not tie the venting/draining for Envirolet®/SG System into any other existing venting/draining.
- Excess liquid drain, if required, must be gravity fed the entire path from composting tank to drain site.
- Composting tanks and other electrical components located outside should be in a covered structure to protect from the elements and to keep warm in cold/freezing temperatures.

Contact Us
Further things to avoid can be found in the Troubleshooting and Installation Errors section. If in doubt, please contact us for assistance.

Safety Guidelines

Important Envirolet®/SG safety guidelines and information.

READ FIRST

Please read this section carefully and follow all guidelines. Educate all system users on these safety guidelines.

- Safety Warning
- Fire Hazard Warning
- AC Power Cord
- 120VAC Electric Models
- 230VAC Electric Models
- Electric Components
- More Important Safety Guidelines

SAFETY WARNING

For your safety, please follow all safety guidelines before beginning the installation process.

FIRE HAZARD WARNING

Do not add glowing or burning materials to system. This includes cigarettes, hot ashes, matches and any other materials that may be a fire or safety hazard. Refer to the Do Not Add List in the Use & Care section for other materials that should not be added to your system.

Europe

In Europe, it is required that you adhere important fire safety warning label in a location near bathroom toilet to advise users. See label sample below.

WARNING!
Do not add glowing or burning materials to composting toilet system (cigarettes, matches, ashes, etc.) as this is a fire hazard.

VARNING!
Kast ikke glødende eller brennende materiale i kompostsystemet, da dette kan utgjøre en brannfare.

VARNING!
Kasta ej ej glödande eller brinnande material såsom cigarrettfimpar och aska i Komposttoalett-systemet. Detta kan utgöra en brandfara.

VAROITUS!
Älä heitä palavaa tai hehkuvaa materiaalia (tuhkaa, tupakantumppeja, yms.) kompostointijärjestelmään, koska tämä voi aiheuttaa palovaaran.

Use as directed. To ensure proper performance, please be sure to contact us if you have installation or operation questions.

AC POWER CORD

The AC power cord on your Envirolet®/SG System is approximately 3m/9ft long. Plug the power cord to a certified and grounded (3-prong in North America) plug wall outlet or receptacle. **Modification to electrical components may be unsafe and will void warranty.**

120VAC ELECTRIC MODELS

The receptacle should be connected to a 120VAC, 60hz, 15-amp fuse service in your main electrical box. No extension cords should be used. **Do not cut, extend or hard wire. Modification to electrical components may be unsafe and will void warranty.**

230VAC ELECTRIC MODELS

The receptacle should be connected to a 230VAC, 50hz, 10-amp fuse service in your main electrical box. No extension cords should be used. **Do not cut, extend or hard wire. Modification to electrical components may be unsafe and will void warranty.**

ELECTRIC COMPONENTS

Do not alter any electric components. Only an authorized service technician can replace or change the power cord. Failure to comply could result in an unsafe electrical or fire hazard and will void warranty. **Modification to electrical components may be unsafe and will void warranty.**

MORE IMPORTANT SAFETY GUIDELINES

Be sure to read and follow all safety warnings above in addition to safety information below.

#	SAFETY GUIDELINE	CHECK BOX ☑
1	Use only as directed.	☐
2	All Envirolet®/SG products and accessories (except for outside vent and drain fixtures) must be installed in a covered structure (i.e., cottage, shed, work shop, garage, etc.) to safely operate and to help protect system from rain, snow, water, dust, animals and any other possible elements, damage or electrical hazards.	☐
3	Do not modify or alter system without first speaking to authorized technician.	☐
4	Do not place anything over the mesh (louvered) opening on the Service Panel on the Envirolet®/SG Compost Unit as this will restrict air flow, affect composting process and may damage fans.	☐
5	Keep children and pets away from vacuum generator, power supply unit, composting unit/tank and any other electric components.	☐
6	Do not use a damaged cord or plug. Replace immediately.	☐
7	Only an authorized service technician can replace or change the power cord.	☐
8	Use only Sancor replacement parts or components.	☐
9	Do not use harsh chemicals to clean system. This will hurt the composting process.	☐
10	Do not add anti-freeze to system to prevent freezing. This will hurt the composting process. Refer to winter use section of online manual for info on using your system in the winter or in freezing conditions.	☐

Save this Owner's Manual for future reference.

Certified For Use

On top of being used in-the-field for over 30 years, Envirolet®/SG Composting Toilet Systems are certified for use.

Certified in North America

In North America, Envirolet®/SG Composting Toilet Systems have been certified by CSA (Canadian Standards Association) to meet various certifications including CSA ANSI/NSF Standard-41.

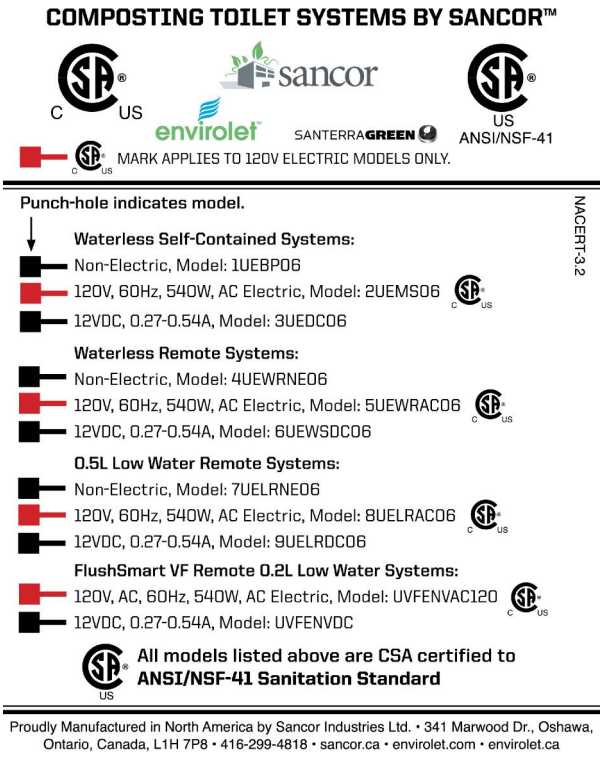
ANSI/NSF Standard-41 is a performance standard required by most of North America for composting toilet systems. This test includes a system capacity rating.

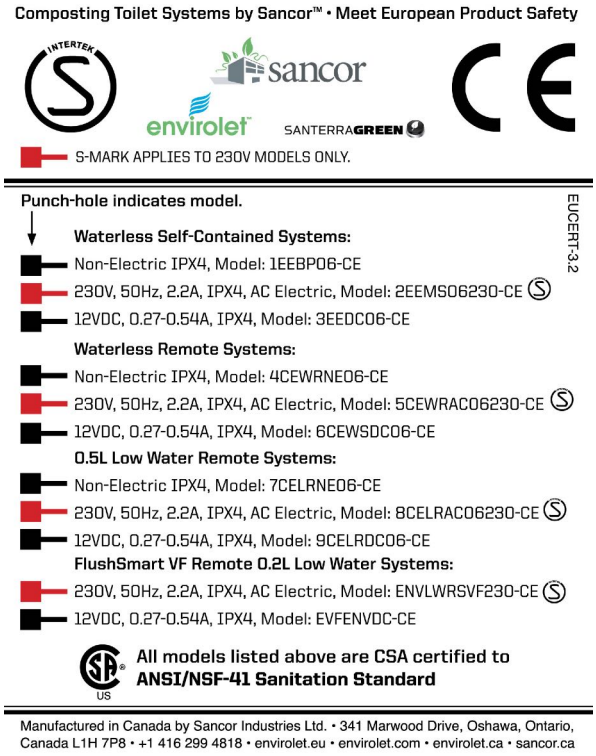
Envirolet®/SG is also CSA Plumbing and Electric certified in North America.

Certified in Europe

Your Envirolet®/SG Composting Toilet System is CE certified to meet European standards.

AC electric models are Semko certified.





Certification label design/look subject to change.

Contact your Sancor Industries Ltd. for more certification information or specific region information.

Envirolet®/SG: Helping You To Go Green!

Congratulations on your decision to go green! Even if you chose to use an Envirolet®/SG for other reason (ease of installation, economical, etc.) you have still gone with a green sanitation solution!

Attractive & Modern

Envirolet®/SG offers clean and modern bowl-design options that look great in any bathroom. Being green never looked so good!

Installs Virtually Anywhere

Envirolet®/SG provides a sanitation solution for many applications because it installs easily on any grade. Above, below or level.

Eco-Friendly

Envirolet®/SG is nice to the environment. Waterless, 0.5L low flush and 0.2L micro-flush options save tens of thousands of litres of water per year while converting waste to compost. No burning or chemicals are used in the process.

Advanced Technology

Envirolet®/SG has many advanced options to choose from, including the Envirolet®/SG FlushSmart VF—the most advanced environmental toilet system available. The powerful vacuum assisted 0.2L micro-flush toilet allows for easy "up," "down," or "level" flush action. The vacuum generator pulverizes and aerates waste for improved composting efficiency.

Envirolet®/SG: Composting & Aeration Process

Envirolet®/SG Automatic Six-Way Aeration™ is Key

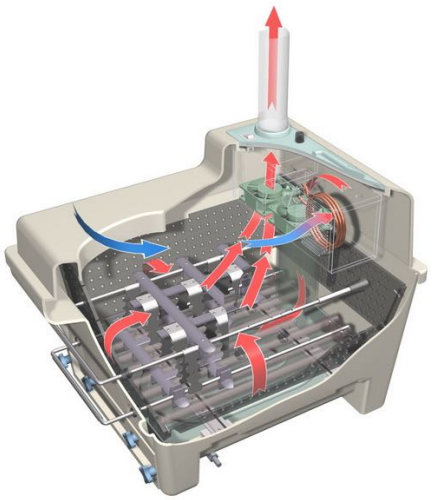
Understanding the composting process is important for proper maintenance and system care. All Envirolet®/SG Composting Toilet Systems work on the same principal, but there are some slight differences based on system type and power configuration. *Here is how it works:*

Stage	Process
1	**Outside Air Enters** Air enters the Envirolet®/SG through toilet seat (Waterless Systems) or service panel (Low Water Remote or FlushSmart VF Systems) area because of negative pressure present in the unit created by dual fans and ventilation.
2	**Air is Heated** The outside air is drawn by the Blower Fan towards back of unit and is forced through the thermostatically controlled Heater.
3	**Heated Air is Forced Down** The heated air is then forced down Blower Pipe by the powerful Blower Fan to the Tray area in the bottom of the unit.
4	**Envirolet®/SG Automatic Six-Way Aeration™** The heated air is then forced back up by the powerful Vent Fan (AC Electric and 12VDC models). This creates the patented Automatic Six-Way Aeration™ process as the heated air travels through all six sides of the waste and compost material (bottom, top and four sides) of the specially designed Aeration Basket. This process allows for maximum aeration for rapid evaporation and compost-action.
5	**Evaporation** Rapid evaporation of liquids occurs as the result of a powerful dual-fan system that exhausts the evaporated liquids up the Venting System until it exits the Envirolet®/SG System completely through the Wind Turbine Ventilator or V Rain Cap.
6	**Composting** The remaining solid material (85-90%) is left in a warm and well-aerated environment, ideal for composting. Additives (peat moss, Compost Accelerator) help the natural microbe-action further to speed up the composting process.

How the process works in all 4 System types. Visit our website for more detail information.

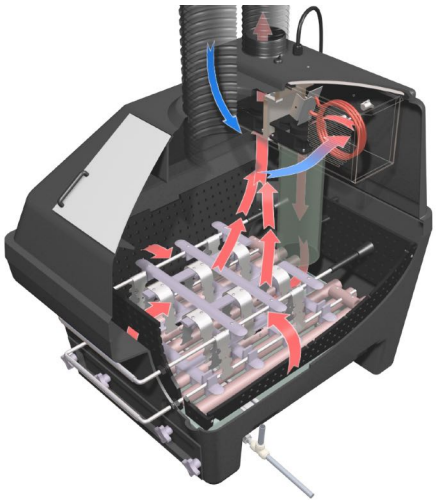
Envirolet®/SG Waterless Self-Contained System

Air is drawn in through toilet seat. Small gap between toilet bowl and trap allows this.



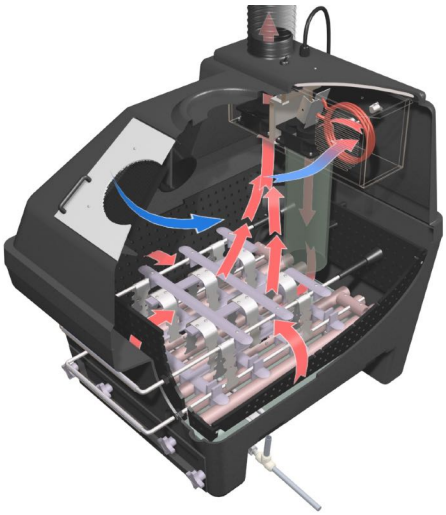
Envirolet®/SG Waterless Remote System

Air is drawn in through toilet seat in bathroom.



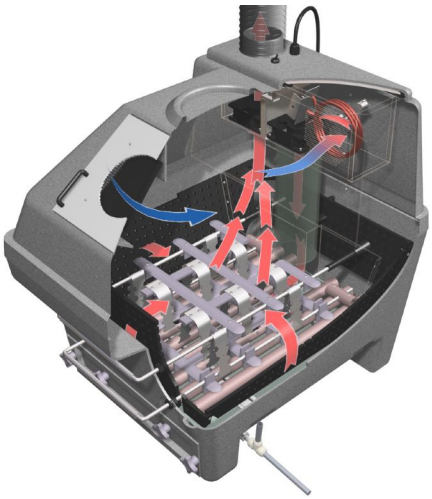
Envirolet®/SG Low Water Remote System

Air is drawn in through service panel.



Envirolet®/SG FlushSmart VF System

Air is drawn in through service panel.



Systems/Models

Models that these instructions refer to. **Please be sure to follow the instructions for your specific model.**

Envirolet®/SG Waterless Self-Contained Models

WATERLESS, ALL-IN-ONE

NORTH AMERICA

Non-Electric: Envirolet® Basic Plus/Santerra Green™ X10 (1UEBP06, 1CEBP06)
12VDC: Envirolet® DC12/ Santerra Green™ X20 (3UEDC06, 3CEDC06)
120VAC: Envirolet® MS10/Santerra Green™ X30 (2UEMS06, 2CEMS06)

EUROPE AND SCANDINAVIA

Non-Electric: Envirolet® Basic Plus/Santerra Green™ X10 (1EEBP06-CE)
12VDC: Envirolet® DC12/Santerra Green™ X20 (3EEDC06-CE)
230VAC: Envirolet® MS10/Santerra Green™ X30 (2EEMS06230-CE)

ENVIROLET®/SG WATERLESS SELF-CONTAINED (WSC) SYSTEM INSTALLATION

Envirolet®/SG Waterless Remote Models

WATERLESS, TOILET ABOVE, TANK BELOW

NORTH AMERICA

Non-Electric: Envirolet® Waterless Remote NE/Santerra Green™ Y40 (4UEWRNE06, 4CEWRNE06)
12VDC: Envirolet® Waterless Remote DC/Santerra Green™ Y50 (6UEWSDC06, 6CEWSDC06)
120VAC: Envirolet® Waterless Remote AC/Santerra Green™ Y60 (5UEWRAC06, 5CEWRAC06)

EUROPE AND SCANDINAVIA

Non-Electric: Envirolet® Waterless Remote NE/Santerra Green™ Y40 (4CEWRNE06-CE)
12VDC: Envirolet® Waterless Remote DC/Santerra Green™ Y50 (6CEWSDC06-CE)
230VAC: Envirolet® Waterless Remote AC/Santerra Green™ Y60 (5CEWRAC06230-CE)

ENVIROLET®/SG WATERLESS REMOTE SYSTEM (WRS) INSTALLATION

Envirolet®/SG Low Water Remote Models

0.5L LOW GRAVITY FLUSH, TOILET ABOVE, TANK BELOW

NORTH AMERICA

Non-Electric: Envirolet® Low Water Remote NE/Santerra Green™ Z70 (7UELRNE06, 7CELRNE06)
12VDC: Envirolet® Low Water Remote DC/Santerra Green™ Z80 (9UELRDC06, 9CELRDC06)
120VAC:Envirolet® Low Water Remote AC/Santerra Green™ Z90 (8UELRAC06, 8CELRAC06)

EUROPE AND SCANDINAVIA

Non-Electric: Envirolet® Low Water Remote NE/Santerra Green™ Z70 (7CELRNE06-CE)
12VDC: Envirolet® Low Water Remote DC/Santerra Green™ Z80 (9CELRDC06-CE)
230VAC: Envirolet® Low Water Remote AC/Santerra Green™ Z90 (CELRAC06230-CE)

ENVIROLET®/SG LOW WATER REMOTE SYSTEM (LWRS) INSTALLATION

Envirolet®/SG FlushSmart VF Models

0.2L LOW VACUUM FLUSH, SEPARATE TOILET & TANK

NORTH AMERICA

120VAC: Envirolet® FlushSmart VF 300/Santerra Green™ V300
120VAC: Envirolet® FlushSmart VF 700/Santerra Green™ V700
120VAC: Envirolet® FlushSmart VF 700/Santerra Green™ V800
12VDC: Envirolet® FlushSmart VF 320/Santerra Green™ V320
12VDC: Envirolet® FlushSmart VF 720/Santerra Green™ V720
12VDC: Envirolet® FlushSmart VF 720/Santerra Green™ V820
120VAC: Envirolet® FlushSmart VF 350/Santerra Green™ V350 Double Tank
120VAC: Envirolet® FlushSmart VF 750/Santerra Green™ V750 Double Tank
120VAC: Envirolet® FlushSmart VF 750/Santerra Green™ V850 Double Tank
12VDC: Envirolet® FlushSmart VF 370/Santerra Green™ V370 Double Tank
12VDC: Envirolet® FlushSmart VF 770/Santerra Green™ V770 Double Tank
12VDC: Envirolet® FlushSmart VF 770/Santerra Green™ V870 Double Tank

EUROPE AND SCANDINAVIA

230VAC: Envirolet® FlushSmart VF 300/Santerra Green™ V300
230VAC: Envirolet® FlushSmart VF 700/Santerra Green™ V700
230VAC: Envirolet® FlushSmart VF 700/Santerra Green™ V800
12VDC: Envirolet® FlushSmart VF 320/Santerra Green™ V320
12VDC: Envirolet® FlushSmart VF 720/Santerra Green™ V720
12VDC: Envirolet® FlushSmart VF 720/Santerra Green™ V820
230VAC: Envirolet® FlushSmart VF 350/Santerra Green™ V350 Double Tank
230VAC: Envirolet® FlushSmart VF 750/Santerra Green™ V750 Double Tank
230VAC: Envirolet® FlushSmart VF 750/Santerra Green™ V850 Double Tank
12VDC: Envirolet® FlushSmart VF 370/Santerra Green™ V370 Double Tank
12VDC: Envirolet® FlushSmart VF 770/Santerra Green™ V770 Double Tank
12VDC: Envirolet® FlushSmart VF 770/Santerra Green™ V870 Double Tank

ENVIROLET®/SG FLUSHSMART VF (FSVF) SYSTEM INSTALLATION

Use as directed. To ensure proper performance, please be sure to contact us if you have installation or operation questions.

FlushSmart Model Differences

- **300, 700 and 800 Series Models**
  1 toilet and 1 composting unit/tank. 120VAC or 230VAC.
- **320, 720 and 820 Series Models**
  1 toilet and 1 composting unit/tank. 12VDC.
- **350, 750 and 850 Double Tank Series Models**
- 1 toilet and 2 composting units/tanks. 120VAC or 230VAC.
- **370, 770 and 870 Double Tank Series Models**
  1 toilet and 2 composting units/tanks. 12VDC.

FLUSHSMART DOUBLE TANK MODEL

Warranty

Envirolet® and Santerra Green™ Composting Toilets Systems come with a **Lifetime Warranty** on the body of the composting tank/system and a **5-Year Warranty** on all internal components. Failure to follow installation instructions may void warranty. Refer to warranty card for complete terms and conditions.

BEFORE INSTALLATION: Inspect Box & Contents

Inspect box and contents upon delivery to make sure you received everything.

Please read this before continuing with installation to ensure there are no missing or broken parts.

IMPORTANT

Check contents of system and accessory box(es) before beginning installation and report any missing parts or damage immediately.

There are a few important things to do before you begin the installation process of your new Envirolet®/SG Composting Toilet System.

CHECK CONTENTS OF BOX

It is important to check the contents of your shipping carton(s) to make sure that you have received all components. Ensure any optional items purchased are included.

Empty all cartons and remove any packing material (except paper mat, see below). Keep boxes in as good of shape as possible in case you need to use again. A list of the included components is found in in the box.

Please report any missing components as soon as possible. Note, that depending on what you ordered your order may arrive in multiple boxes and these boxes may arrive separately.

DO NOT REMOVE PAPER MAT

Do not remove the Paper Mat located in Envirolet®/SG composting unit/tank component. This is not packing material. It is an important component to proper system start-up.

CHECK FOR DAMAGE

Report any shipping damage or missing accessories to your point of purchase within 24 hours **of delivery. After 24 hours it may not be possible to file a shipping claim if the damage is due to shipping damage.** For up-to-date contact information visit sancor.ca or your local country or region specific Envirolet®/SG website:

USA & World envirolet.com
Canada envirolet.ca
Europe envirolet.eu
Norway enviroletnorge.com
Finland enviroletfinland.com

Santerra Green santerragreen.com

You can also find complete more info on the cover of this manual.

AFTER 24 HOURS

Report any damage or missing parts within 24 hours. We are not responsible and may not be able to process a shipping damage claim after 24 hours.

Included System Components - What's in the Box

List of included items for each system type. Look for the packing slip included with the system.

Tools Required for Most Installations

Suggested tools to have on hand for easy installation.

- Hand drill
- Jig-saw
- Screwdrivers (Philips, flathead) and/or drill
- Plumb line (to line up vent)

Got Everything?

Be sure to check the contents of the box to make sure you have everything.

Important

If something is missing, please be sure to contact your point of purchase immediately. If you the system has been delivered please check that all packages have arrived as they sometimes get separated in shipping.

Notes

Depending on your location, some items may not be included in standard system kit.

Envirolet®/SG Waterless Self-Contained Components & Tools Required

Components

The following is a list of items included with your Envirolet®/SG Waterless Self-Contained System.

#	Quantity	Unit	Item
1	1	Each	Envirolet®/SG Compost Unit (North America: 120VAC Electric, CSA Electric or Europe/Scandinavia: 230VAC Electric, 50Hz, 2.2A, IPX4, CE, Semko)
2	10'/3m	Length	3"/75mm Vent Pipe (provided in 4 x 30"/76cm sections)
3	3	Each	3"/75mm Couplings
4	1	Each	Rubber Roof Flashing
5	1	Each	Silicone Sealant Tube (small)
6	1	Each	Premix Starter Mix Kit (bag)
7	1	Each	8oz/236mL Compost Accelerator (jar)
8	1	Each	4"/110mm Wind Turbine Ventilator
9	5'/152cm	Length	½"/13mm Drain Line (Basic Plus and DC12 models only)
10	1	Each	Daily Mix (sample size); *Not included in Norway*

Envirolet®/SG Waterless Remote: Components & Tools Required

Envirolet®/SG Waterless Remote System included components (standard system).

Components

The following is a list of items included with your Envirolet®/SG Waterless Remote System.

#	Quantity	Unit	Item
1	1	Each	Waterless Toilet with instructions, mounting kit & accessories
2	1	Each	Envirolet®/SG Composting Unit (North America: 120VAC Electric, CSA Electric or Europe/Scandinavia: 230VAC Electric, 50Hz, 2.2A, IPX4, CE, Semko)
3	1	Each	4”/110m Wind Turbine Ventilator
4	2’/60cm	Each	8”/200mm Drain Hose
5	1	Length	8”/200mm Drain Gear Clamp
6	4’/1.2m	Length	4”/110mm Vent Hose with 4.0”/110mm Coupling
7	1	Each	4”/110mm Vent Gear Clamp
8	5.0’/152cm	Length	0.5”/13mm Drain Line (Non-Electric and DC models only)
9	1	Each	Drain Breather “T” (Non-Electric and DC models only)
10	1	Each	Silicone Sealant Tube (small)
11	1	Each	Premix Starter Mix Kit (bag)
12	1	Each	8oz/236mL Compost Accelerator
13	1	Each	Daily Mix (sample size); *Not included in Norway*

Envirolet®/SG Low Water Remote: Components & Tools Required

Envirolet®/SG Low Water Remote System included components (standard system).

Components

The following is a list of items included with your Envirolet®/SG Low Water Remote System.

#	Quantity	Unit	Item
1	1	Each	Low Water Toilet with instructions, mounting kit & accessories
2	1	Each	Envirolet®/SG Composting Unit (North America: 120VAC Electric, CSA Electric or Europe/Scandinavia: 230VAC Electric, 50Hz, 2.2A, IPX4, CE, Semko)
3	1	Each	4”/110m Wind Turbine Ventilator
4	1	Each	Water Supply
5	3’/90cm	Each	3”/75mm Drain Hose
6	4’/1.2m	Length	4”/110mm Vent Hose with 4.0”/110mm Coupling
7	1	Each	4”/110mm Vent Gear Clamp
8	5.0’/152cm	Length	0.5”/13mm Drain Line
9	1	Each	Drain Breather “T”
10	1	Each	Silicone Sealant Tube (small)
11	2	Each	Premix Starter Mix Kit (bag)
12	1	Each	8oz/236mL Compost Accelerator
13	1	Each	Daily Mix (sample size); *Not included in Norway*

Envirolet®/SG FlushSmart VF: Components & Tools Required

Envirolet®/SG FlushSmart VF System included components (standard system).

Components

The following is a list of items included with your Envirolet®/SG FlushSmart VF System.

#	Quantity	Unit	Item
1	1	Each	Vacuum Toilet (300, 700 or 800 Series model) with instructions, mounting kit & accessories
2	1	Each	Envirolet®/SG Composting Unit (North America: 120VAC Electric, CSA Electric or Europe/Scandinavia: 230VAC Electric, 50Hz, 2.2A, IPX4, CE, Semko)
3	1	Each	Vacuum Generator Unit with instructions
4	1	Each	Vacuum Generator Fuse Breaker
5	1	Each	AC Power Supply Unit (120VAC/12V, 10A or >)
6	1	Each	4”/110m Wind Turbine Ventilator
7	1	Each	Electronic Switch for Vacuum Toilet (700 Models only)
8	4’/1.2m	Length	4”/110mm Vent Hose with 4.0”/110mm Coupling
9	16.0’/4.9m	Length	1.5”/38mm VG4/Toilet/Envirolet®/SG Compost Unit Connecting Hose
10	4	Each	1.5”/38mm Drain Hose Gear Clamps
11	1	Each	4”/110mm Vent Gear Clamp
12	5.0’/152cm	Length	0.5”/13mm Drain Line
13	1	Each	Silicone Hose & Fitting Lubricant (small tube)
14	1	Each	Water Supply with Pre-Set Water Volume Control Regulator
15	1	Each	Silicone Sealant Tube (small)
16	2	Each	Premix Starter Mix Kit (bag)
17	1	Each	8oz/236mL Compost Accelerator
18	1	Each	Daily Mix (sample size); *Not included in Norway*
19	1	Each	Drain Breather “T”

Not Included but Required

For most FlushSmart VF installations solvent cement CPVC is required.

** CONNECTING HOSE MAY BE SUPPLIED IN ONE LENGTH SO END-USER CAN CUT AND FIT TO SPECIFIC INSTALLATION REQUIREMENTS.

System Installation

Please follow the installation guidelines for your specific system type.

Envirolet®/SG Waterless Self-Contained System Installation

PLEASE READ THIS SECTION CAREFULLY.

Envirolet®/SG Composting Unit refers to the complete Envirolet®/SG Waterless Self-Contained System.

Important Notices

IMPORTANT

Do not connect Envirolet®/SG Composting Unit (System) to power supply until instructed (after all components have been individually installed).

WARNING

The Vent system must always be securely attached to your Envirolet®/SG Composting Unit before any operation. Failure to comply could result in an unsafe electrical hazard and/or inside odour.

IMPORTANT

Do not remove the Paper Mat located in Envirolet®/SG Composting Unit. This is not packing material. It is an important component to proper system start-up. If you accidentally remove the Paper Mat, please refer to Initial System Start-Up section for replacement tips before using system.

90° Bends in Vent

IMPORTANT

It is recommended that the 100mm/4" vent pipe be installed straight up, with little or no angles/bends in the venting system. This will ensure proper vent draft and evaporation, and prevent any inside odour.

Do not install any 90° bends (or greater) in your vent installation.

Ready to Go!

It's time to begin installation of the Envirolet Compost Unit component of your Envirolet®/SG Waterless Self-Contained System. Here are the main steps:

A. Position Toilet
B. Cut Vent Hole in Roof/Ceiling
C. Vent/Roof Stack Installation
D. Insert Vent Pipe into System
E. Attach Union Coupling
F. Connect Vent Pipe
G. Install Drain

H. Seal All Vent Connections
I. Insulate Exposed Pipe
J. Attach Rain Cap or Wind Turbine Ventilator

1. Position Toilet

IMPORTANT

It is recommended that your Envirolet®/SG vent system is installed completely "vertical" (or straight-up) for best operation. However, if an angled vent system is required be sure to **use only two 45° elbows maximum** without consulting us for advise. An optional inline Turbo Fan may be required for extended, angled, or difficult vent designs or installations.

IMPORTANT

An angled vent system is **not recommended** for Non-Electric and 12VDC system installations.

IMPORTANT

Do not use any 90° angles in your vent system.

IMPORTANT

Inside odour can be caused by an improperly installed vent system.

A. Position Envirolet®/SG Waterless Self-Contained System in bathroom in location where it will remain. Try to keep the system in area with an ambient temperature **above** 12°C (55°F) for optimum composting.
B. Be sure to select a location that allows you to access the front of the unit to remove the emptying tray (30"/76cm or more is ideal). Also, keep the vent location in mind when positioning in front of windows or other wall elements so they are not obstructed by vent pipe.

2. Cut Vent Hole in Roof/Ceiling

IMPORTANT

It is always best to error on the side of making your vent hole too small because you can always make it bigger!

A. Align the center of the vent connection on your Envirolet®/SG System (located at the top-left on DC and AC models *and* directly center on Non-Electric models) with the center mark (where hole will go) on roof and/or ceiling of bathroom. For best results, use a plumb line to center.
B. Mark center spot before cutting/drilling.
C. Cut or drill 3"/75mm diameter hole(s) through roof and/or ceiling. *You may want to use section of vent pipe as a template.*

3. Vent/Roof Stack Installation

Installation of Insulated Roof Stack:

A. Apply liberal amount of silicone sealant around cut hole on roof to prevent any leakage (from rain, snow).
B. Slide provided 12"/30cm x 12"/30cm Rubber Roof Flashing over Insulated Roof Stack portion (on top of 3"/75mm White Pipe).
C. Slide protruding 3"/75mm White Pipe through 3"/75mm hole on roof.
D. Ensure that the Rubber Roof Flashing is well sealed with silicone sealant (over bottom & around edges). Also seal with silicone sealant around the bottom edge of Insulated Roof Stack to secure and prevent any leakage.

4. Insert Vent Pipe into System

A. Apply silicone sealant around outside bottom edge of one section of 3"/75mm x 36" White Vent Pipe section and insert securely into the Vent Connection opening on the Top Panel of the system.
B. Seal with silicone sealant around the top edge of the Vent Connection and outside edge of the vent pipe to properly.

5. Attach Union Coupling (Optional)

The optional Union Coupling will allow for quick disconnection of your vent system for convenient servicing, if required, of either your Envirolet®/SG system or the "Works-in-a-Drawer" electrical service compartment.

A. Use the Union Coupling provided (optionally) to join securely the 3"/75mm Vent Connection on the Envirolet®/SG system to the "first" section of 3"/75mm White Pipe installed on your vent installation.
B. Insert both ends of 3" connections securely into Union Coupling and use a ¼" socket wrench or flat head screwdriver to tighten bolts on Union Coupling and to secure sealed vent connection.

6. Connect Remaining Vent Pipe

A. Securely connect any remaining 3"/75mm White Pipe, using the 3"/75mm Couplings provided (cut 3"/75mm White Pipe to size, if necessary).
B. Seal securely with silicone sealant (not Union Coupling) around **all** 3"/75mm Coupling connections to prevent any air leakage (odour) .

7. Install Drain

IMPORTANT

If your system has a drain it **must** be connected.

Non-Electric and 12VDC Models

Non-Electric and 12VDC models are fitted with an excess liquid drain that must be connected to a proper drain site.

AC Electric Models

120V and 230V AC models do not require a drain, in most applications in normal operating conditions. In order to operate without a drain, be sure to operate Fans and Heater as directed. A drain can optionally be fitted with a drain if heavy use or frequent power outages are expected.

A. Connect one side of "T" portion of quick connect breather "T" to 13mm/1/2" drain (152cm/5' included standard) line that exits compost system (right-hand side when facing tank).
B. Important: Make sure open part of "T" (middle) is facing up to prevent air-lock.
C. Connect other side of "T" to length of 13mm/1/2" drain line.
D. Place end of drain line to acceptable drain site (leach field, holding tank, etc.). Make sure there is a gravity drop the entire path from composting tank drain exit to drain site.
E. Insulate drain line if there is a chance of freezing.

IMPORTANT

Please be sure to connect excess fluid drain to an acceptable drain site, according to local regulations.

8. Seal All Vent Connections

Double check that **all** vent connections are thoroughly sealed with silicone sealant. This is an important step because it will help prevent any odour leakage. Even a small hole (pin hole) can lead to odour escape, so please double check.

9. Insulate Exposed Pipe

Insulate any exposed 3"/75mm Vent Pipe in attic, walls, outside, cold air space, etc. to prevent condensation and liquid build-up in your System. Failure to properly insulate exposed vent pipe will cause improper operation of system.

10. Attach Wind Turbine Ventilator

1. Attach 4"/100mm Wind Turbine Ventilator* to the top of to the top of the Insulated Roof Stack.
2. Secure the Wind Turbine with silicone sealant and at least 3-4 tapping screws (not supplied).

IMPORTANT

Extend the 100mm/4" rigid vent pipe higher than 0.9m/3' minimum for any installation surrounded by high trees, hills, other structures and/or with a high roof peak and/or located in a valley.

Envirolet®/SG Waterless Remote System Installation

PLEASE READ THIS SECTION CAREFULLY.

Important Notices

IMPORTANT

Do not remove the Paper Mat located in Envirolet®/SG Composting Unit. This is not packing material. It is an important component to proper system start-up.

WARNING

The vent system must always be securely attached to your Envirolet®/SG Composting Unit before any operation. Failure to comply could result in an unsafe electrical hazard.

90° Bends in Vent

IMPORTANT

It is recommended that the 100mm/4" vent pipe be installed straight up, with little or no angles/bends in the venting system. This will ensure proper vent draft and evaporation, and prevent any inside odour.

Do not install any 90° bends (or greater) in your vent installation.

Ready to Go!

It's time to begin installation of your Envirolet®/SG Waterless Remote System! Here are the main steps:

Waterless Toilet Installation

1. Position Waterless Toilet
2. Cut hole in floor for Waterless Toilet
3. Secure Waterless Toilet to floor

Composting Unit

1. Position Envirolet®/SG Composting Unit
2. Connect flex vent to Composting Unit
3. Install rigid vent pipe (not supplied)
4. Connect flexible vent and rigid pipe
5. Attach Wind Turbine Ventilator
6. Seal all vent connections
7. Install drain (if required)

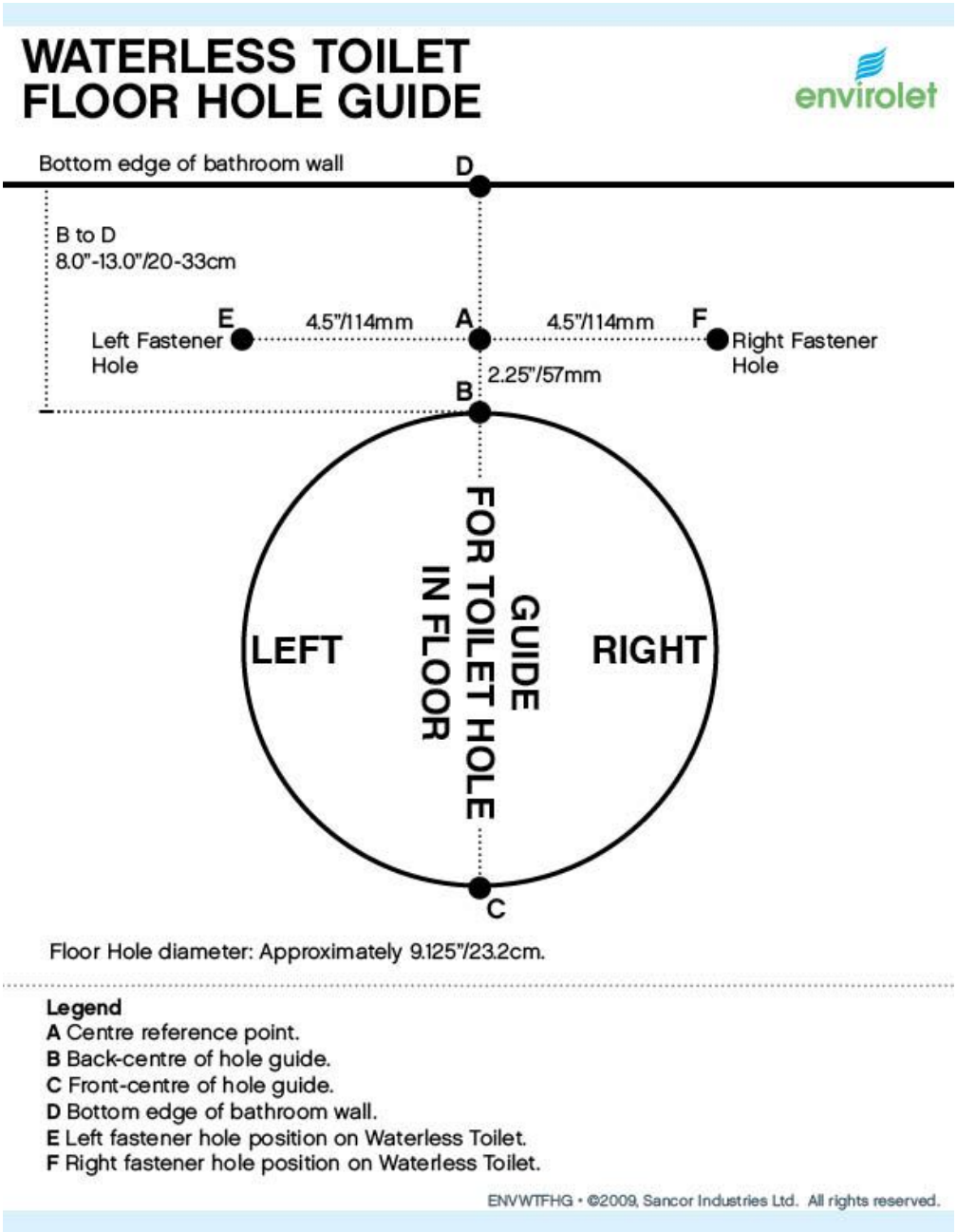
Connection of Components

A. Connect two components of system

Waterless Toilet Installation

1. Position Waterless Toilet

A. Determine where you will be installing the Waterless Toilet. Do not do any cutting of the floor until you are sure! Remember that the Waterless Toilet must be **directly** above the Composting Unit for a gravity drop.
B. Refer to **Waterless Toilet Floor Hole Guide** below for placement specifications.



Once you have determined the exact location of the Waterless Toilet, carefully trace the position of hole in floor using included cardboard template. This outline is where you will cut. Please note that the template and subsequent hole are slightly oval (i.e., not perfectly round).

2. Cut hole in floor for Waterless Toilet

A. Follow lines and carefully cut hole in floor using jigsaw or similar tool depending on tools available and floor type.

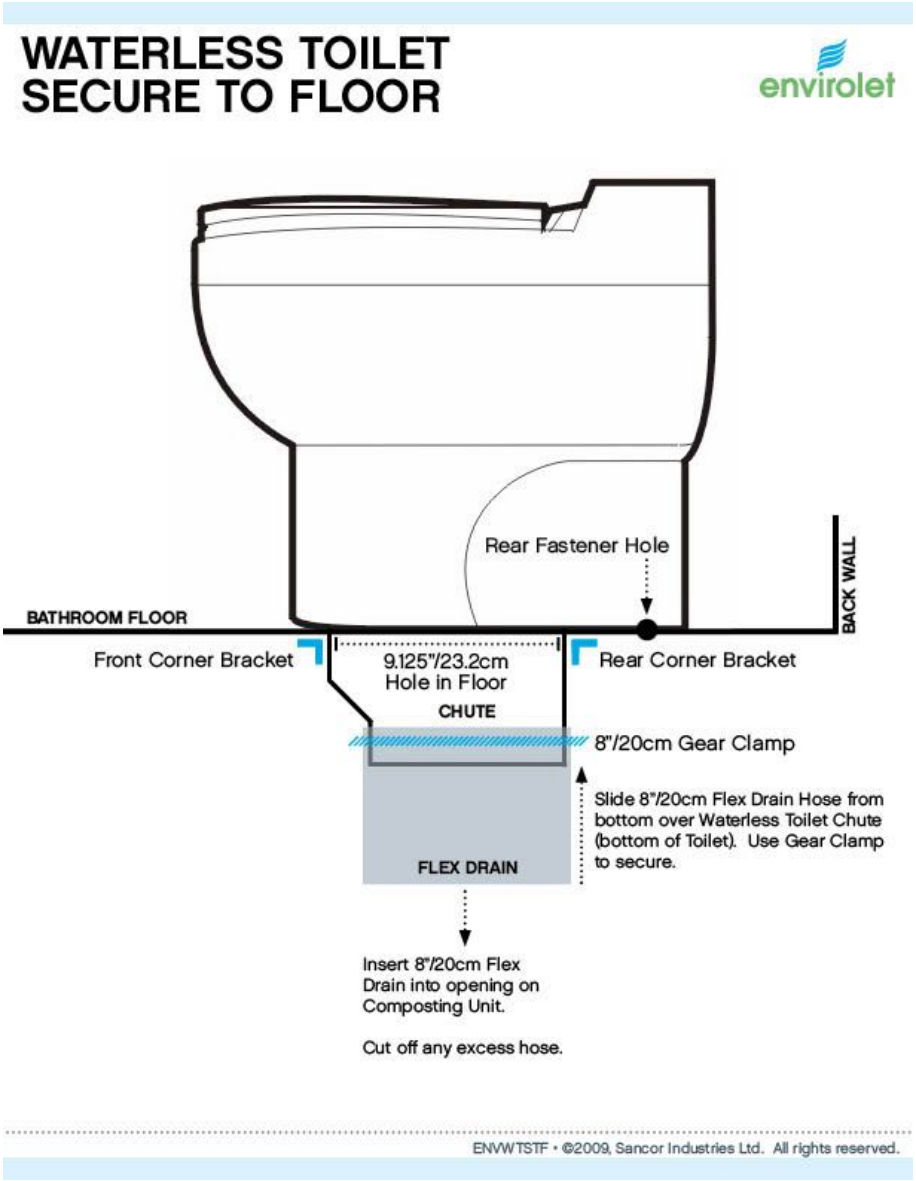
IMPORTANT

When cutting your floor hole, It is always best to initially make a hole that is too small because you can always make it larger. But, you cannot make it smaller!

B. Drill holes in floor (E and F) for mounting bolts.

3. Secure Waterless Toilet to floor

Once hole in floor is cut you are ready to secure the Waterless Toilet to the floor. Refer to **Waterless Toilet Secure to Floor** diagram below.



C. Attach rubber gasket seal to bottom of Waterless Toilet. Place adhesive side of gasket inside recessed area of bottom of toilet.
D. Insert Waterless Toilet into hole in floor. The chute (bottom part of the Waterless Toilet) should fit through hole in floor.
E. Centre/align Waterless Toilet in desired position.
F. Using included mounting hardware (bolts, nuts, washers) secure Waterless Toilet to floor.
G. Insert large bolt through open slot on Waterless Toilet and through bathroom floor.
H. Place washer between bolt and Waterless Toilet.
I. Place another washer between bottom of floor and nut.
J. Secure with tight fit.
K. From below (under bathroom floor) affix front and rear corner brackets ("L" brackets) to bottom of Waterless Toilet to help keep toilet in place.
L. Once secure, slide Flex Drain Hose over Waterless Toilet chute (bottom of toilet). Use gear clamp to secure.
M. Do not attach to Composting Unit until Composting Unit installation is complete.

Composting Unit Installation

1. Position Envirolet®/SG Composting Unit

Locate in Covered Structure

Position the Envirolet®/SG Composting Unit in a covered structure (work shop, basement, garden shed, utility shed, box, etc.) in area that is free of obstructions (pipes, electric boxes, wires, etc.).

Temperature

Try to keep Composting Unit in area with an ambient temperature above 12°C (55°F) for optimum composting. Refer to the Winter Use section if you plan to use the system in freezing or near-freezing temperatures.

Protect from the Elements

For safety and performance, the Envirolet®/SG Composting Unit must sit horizontally on a flat dry surface and must be installed in a vented covered structure (work shop, basement, garden shed, utility shed, box, etc.) to protect from the elements (water, rain, snow, etc.) and to protect from electrical damage or hazard. Refer to the Safety Guidelines section for more info on safe installation and operation.

Directions

A. Place the Envirolet®/SG Composting Unit **directly** below the hole in floor for Waterless Toilet (or where it will be) for a gravity drop.
B. Do not secure Envirolet®/SG Composting Unit or Waterless Toilet until vent installation is complete. This will allow for any placement modifications, if required.

2. Connect Flex Vent to Composting Unit

A. Place 4"/110mm Flex Vent pipe section over vent opening on the Top Panel of Envirolet®/SG Composting Unit (tank) using the supplied 4"/110mm stainless steel Gear Clamp.
B. Tighten Gear Clamp over Flex Vent to secure to plastic opening for proper seal.
C. Based on your individual installation requirements, you may wish to increase or decrease the length of the 100mm/4" Flex Vent pipe (4'/1.2m is standard).

IMPORTANT

Seal vent connection on Top Panel securely with 4"/110mm Gear Clamp and Silicone Sealant provided to prevent odours.

IMPORTANT

Install minimum of 12"/30cm of 4"/110mm Flexible Vent Pipe that connects Composting Unit to 4"/110mm rigid pipe section(s). This will prevent rigid pipe breakage due to possible ground shifting caused by freezing temperatures or other movement.

3. Install Rigid Vent Pipe (not supplied)

Rigid Vent

Not included, due to transportation costs, is 10'/3m to 20'/6m (for a typical installation) of rigid ABS or PVC Pipe that is required to complete vent installation. This rigid pipe travels up along the wall of your structure above the roof line (minimum 2'/0.6m) and is fitted with the included Wind Turbine Ventilator. The rigid pipe connects to the 4"/110mm Flex Vent Pipe via an attached 4"/110mm coupling provided. This low-cost rigid pipe can be easily acquired from your local dealer or at your local hardware, plumbing or home center.

A. Determine length of 4"/110mm rigid vent pipe required for your installation. To properly determine length of rigid vent pipe required be sure to allow a minimum of 2'/0.6m – 3'/0.9m rigid vent pipe to extend above the structure roof line to ensure proper vent draft and maximum performance of the 4"/110mm Wind Turbine Ventilator.
B. Position rigid pipe as close as possible to the vent exit on the Envirolet®/SG Composting Unit.
C. **Again, it is very important to avoid any 90° bends in your vent installation.**

D. Attach rigid pipe securely to wall from just above Envirolet®/SG Composting Unit entire way up wall to above roof line. Each installation will vary significantly, depending on location requirements. For added performance insulate all rigid vent pipe.

4. Connect Flexible Vent and Rigid Pipe

Connect the flexible vent with supplied (Scandinavia only) 110mm Coupling to rigid pipe.

5. Attach Wind Turbine Ventilator

A. Attach the 4"/110mm Wind Turbine Ventilator to the top of the rigid vent pipe using straight coupling (not supplied).
B. Secure the Wind Turbine Ventilator with silicone sealant and at least 3-4 tapping screws (not supplied).

IMPORTANT

Extend the 4"/110mm rigid vent pipe higher than 3'/0.9m minimum for any installation surrounded by high trees, hills, other structures and/or with a high roof peak and/or located in a valley.

6. Seal All Vent Connections

A. Seal all vent connections with silicone sealant. This is an important step because it will help prevent any odour leakage. Even a small hole can lead to odour escape, so please double check.

7. Install Drain (if required)

Non-Electric and 12VDC models come standard with a drain that must be connected to an acceptable drain site. The drain is optional on AC Electric models. If your system requires a drain please follow the directions below.

A. Connect one side of "T" portion of quick connect breather "T" to ½"/13mm drain (5'/152cm included standard) line that exits Compost Unit (bottom right-hand side when facing tank).

Important

Make sure open part of "T" (middle) is facing up to prevent air-lock.

B. Connect other side of “T” to length of 13mm/1/2” drain line.
C. Place end of drain line to an **acceptable drain site** (leach field, holding tank, liquid container, etc.). See **Draining Information** section for more details. Make sure there is a gravity drop the entire path from composting tank drain exit to drain site.
D. Insulate drain line if there is a chance of freezing.

IMPORTANT
Please be sure to connect excess fluid drain to an acceptable drain site, according to local regulations.

Connection of Components

IMPORTANT
Do not attach Envirolet®/SG Composting Unit to floor/ground until completing system set-up.

1. Connect Two Components of System

Once the Waterless Toilet and Composting Unit are in place, you are ready to connect them!

1. Insert 8”/20cm Flex Hose Drain into Composting Unit. Ensure it fits inside with a snug fit. Leave at least 4”/10cm or more of extra Flex Hose inside Composting Unit. Cut off any excess Flex Hose.
2. Secure Composting Unit to floor using bottom brackets.

That’s it!

Envirolet®/SG Low Water Remote System Installation

PLEASE READ THIS SECTION CAREFULLY.

Important Notices

IMPORTANT

Do not remove the Paper Mat located in Envirolet®/SG Composting Unit. This is not packing material. It is an important component to proper system start-up.

WARNING

The vent system must always be securely attached to your Envirolet®/SG Composting Unit before any operation. Failure to comply could result in an unsafe electrical hazard.

90° Bends in Vent

IMPORTANT

It is recommended that the 100mm/4” vent pipe be installed straight up, with little or no angles/bends in the venting system. This will ensure proper vent draft and evaporation, and prevent any inside odour.

Do not install any 90° bends (or greater) in your vent installation.

Ready to Go!

It’s time to begin installation of your Envirolet®/SG Low Water Remote System! Here are the main steps:

Low Water Toilet Installation

1. Position Low Water Toilet
2. Install Low Water Toilet

Composting Unit

1. Position Envirolet®/SG Composting Unit
2. Connect flex vent to Composting Unit
3. Install rigid vent pipe (not supplied)
4. Connect flexible vent and rigid pipe
5. Attach Wind Turbine Ventilator
6. Seal all vent connections
7. Install drain

Connection of Components

1. Connect two components of system

Low Water Toilet Installation

IMPORTANT
Do Not Use Any Harsh Chemicals In Toilet. This can damage the seals and valves in the toilet and damage the biological action in your composting toilet unit.

IMPORTANT
Do Not Place or Flush Large Objects such as paper towels, diapers, sanitary napkins etc. down toilet.

IMPORTANT
Toilet must be regularly cleaned and winterized to protect porcelain bowl and seals.

IMPORTANT
Use only non-toxic “green cleaners” to clean the toilet bowl. Dry toilet bowl and seal before leaving for winter or freezing conditions. See Winterizing instructions.

IMPORTANT
If reading manufacturer instructions ignore any mention of connection to anything other than Envirolet®/SG Composting Unit or addition of any chemicals.

1. Position Low Water Toilet

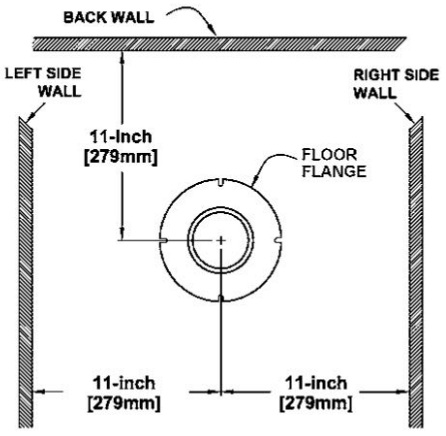
Determine where you will be installing the Low Water Toilet.

Do not do any cutting of the floor until you are sure where the toilet will be!

2. Install Low Water Toilet

Use universal floor-flange provided. Make sure center of floor-flange is at least 11.0”/27cm from any back-wall and/or side-wall (see FIGURE A).

FIGURE A



Cut a 4.5”/11.5cm hole in bathroom floor and insert floor-flange.

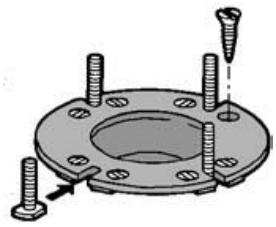
Make certain that the four included toilet mounting bolts align properly with the low water toilet

mounting pattern.

Insert mounting bolts into slotted holes in flange.

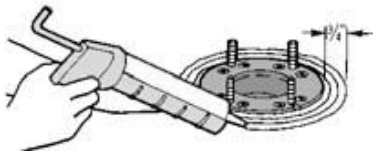
Push fit flange through hole to floor and secure flange to floor using flat head screws through the countersunk holes in flange (see FIGURE B).

FIGURE B



If desired spread bead of silicone sealant around outer edge of floor-flange (seeFIGURE C).

FIGURE C



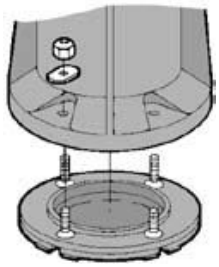
Place and align rubber toilet seal over mounting bolts on floor flange.

Set and mount low water toilet in place by using bolts protruding from rubber seal and floor flange (see FIGURE D).

Install washers and hex nuts to mounting bolts.

Tighten nuts down equally using 7/16”/11.125cm wrench (or adjustment).

FIGURE D



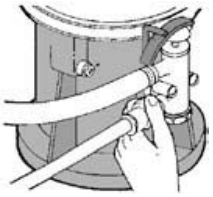
Turn off water supply.

Your low water toilet comes with a 12.0”/30.48cm water supply line (3/8” to 0.5” or 9.525mm to 12.7mm).

Connect securely 3/8”/9.525mm end of water supply line to proper bathroom plumbing connection (recommend having shut off valve installed on bathroom water supply plumbing line).

Connect 0.5”/12.7mm end of water supply line to low water toilet (located at back of foot pedal) to water valve 0.5”/12.7mm MPT inlet using 0.5” fittings on water supply line (see FIGURE E).

FIGURE E

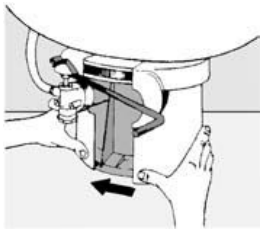


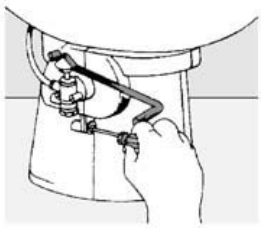
Turn on water supply.

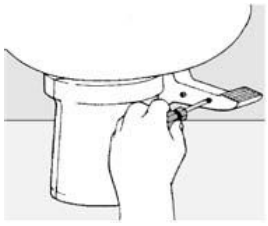
Flush toilet to check for any leaks.

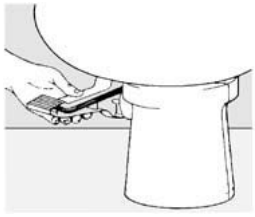
Attach pedestal and pedal cover using screwdriver. See multiple drawings (see FIGURE F).

FIGURE F









3. Winterizing Low Water Toilet

Turn off water supply.

Disconnect 0.5”/12.7mm water supply connection on low water toilet.

Flush and dry thoroughly toilet bowl and rubber seal in toilet of any water (see FIGURE B).

For complete details be sure to read **Winter Use** section.

WARNING

Do not use anti-freeze or any chemicals in toilet as this can damage Composting Unit and/or the natural composting process.

Composting Unit Installation

1. Position Envirolet®/SG Composting Unit

Locate in Covered Structure

Position the Envirolet®/SG Composting Unit in a covered structure (work shop, basement, garden shed, utility shed, box, etc.) in area that is free of obstructions (pipes, electric boxes, wires, etc.).

Temperature

Try to keep Composting Unit in area with an ambient temperature above 12°C (55°F) for optimum composting. Refer to the Winter Use section if you plan to use the system in freezing or near-freezing temperatures.

Protect from the Elements

For safety and performance, the Envirolet®/SG Composting Unit must sit horizontally on a flat dry surface and must be installed in a vented covered structure (work shop, basement, garden shed, utility shed, box, etc.) to protect from the elements (water, rain, snow, etc.) and to protect from electrical damage or hazard. Refer to the Safety Guidelines section for more info on safe installation and operation.

Directions

Place the Envirolet®/SG Composting Unit below the hole in floor for Low Water Toilet (or where it will be) in a position where a gravity drop will **always** be maintained from toilet to drain entry port (top or side entry).

A gravity connection of a 0.25”/7mm vertical drop for every 12.0”/31cm horizontal is required.

IMPORTANT

Maintain gravity drop from Low Water Toilet to Composting Unit with 3” drain hose at all times. There should be no bends or “dips” as this may cause a blockage.

Do not secure Envirolet®/SG Composting Unit until vent installation is complete. This will allow for any placement modifications, if required.

2. Connect Flex Vent to Composting Unit

A. Place 4”/110mm Flex Vent pipe section over vent opening on the Top Panel of Envirolet®/SG Composting Unit (tank) using the supplied 4”/110mm stainless steel Gear Clamp.
B. Tighten Gear Clamp over Flex Vent to secure to plastic opening for proper seal.
C. Based on your individual installation requirements, you may wish to increase or decrease the length of the 100mm/4” Flex Vent pipe (4’/1.2m is standard).

IMPORTANT

Seal vent connection on Top Panel securely with 4”/110mm Gear Clamp and Silicone Sealant provided to prevent odours.

IMPORTANT

Install minimum of 12”/30cm of 4”/110mm Flexible Vent Pipe that connects Composting Unit to 4”/110mm rigid pipe section(s). This will prevent rigid pipe breakage due to possible ground shifting caused by freezing temperatures or other movement.

3. Install Rigid Vent Pipe (not supplied)

Rigid Vent

Not included, due to transportation costs, is 10'/3m to 20'/6m (for a typical installation) of rigid ABS or PVC Pipe that is required to complete vent installation. This rigid pipe travels up along the wall of your structure above the roof line (minimum 2'/0.6m) and is fitted with the included Wind Turbine Ventilator. The rigid pipe connects to the 4"/110mm Flex Vent Pipe via an attached 4"/110mm coupling provided. This low-cost rigid pipe can be easily acquired from your local dealer or at your local hardware, plumbing or home center.

A. Determine length of 4"/110mm rigid vent pipe required for your installation. To properly determine length of rigid vent pipe required be sure to allow a minimum of 2'/0.6m – 3'/0.9m rigid vent pipe to extend above the structure roof line to ensure proper vent draft and maximum performance of the 4"/110mm Wind Turbine Ventilator.

B. Position rigid pipe as close as possible to the vent exit on the Envirolet®/SG Composting Unit. **Again, it is very important to avoid any 90° bends in your vent installation.**

C. Attach rigid pipe securely to wall from just above Envirolet®/SG Composting Unit entire way up wall to above roof line. Each installation will vary significantly, depending on location requirements. For added performance insulate all rigid vent pipe.

4. Connect Flexible Vent and Rigid Pipe

Connect the flexible vent with supplied (Scandinavia only) 110mm Coupling to rigid pipe.

5. Attach Wind Turbine Ventilator

Attach the 4"/110mm Wind Turbine Ventilator to the top of the rigid vent pipe using straight coupling (not supplied). Secure the Wind Turbine Ventilator with silicone sealant and at least 3-4 tapping screws (not supplied).

IMPORTANT

Extend the 4"/110mm rigid vent pipe higher than 3'/0.9m minimum for any installation surrounded by high trees, hills, other structures and/or with a high roof peak and/or located in a valley.

6. Seal All Vent Connections

A. Seal all vent connections with silicone sealant. This is an important step because it will help prevent any odour leakage. Even a small hole can lead to odour escape, so please double check.

7. Install Drain

All models come standard with a drain that must be connected to an acceptable drain site.

A. Connect one side of "T" portion of quick connect breather "T" to ½"/13mm drain (5'/152cm included standard) line that exits Compost Unit (bottom right-hand side when facing tank).

Important

Make sure open part of "T" (middle) is facing up to prevent air-lock.

B. Connect other side of “T” to length of 13mm/1/2” drain line.
C. Place end of drain line to an **acceptable drain site** (leach field, holding tank, liquid container, etc.). See **Draining Information** section for more details. Make sure there is a gravity drop the entire path from composting tank drain exit to drain site.
D. Insulate drain line if there is a chance of freezing.

IMPORTANT
Please be sure to connect excess fluid drain to an acceptable drain site, according to local regulations.

Connection of Components

IMPORTANT
Do not attach Envirolet®/SG Composting Unit to floor/ground until completing system set-up.

1. Connect Two Components of System

Once the Low Water Toilet and Composting Unit are in place, you are ready to connect them!

A. Insert 3”/75mm Flex Hose Drain into Composting Unit. Use one of the three drain ports (2 on side, 1 on top). Ensure it fits inside with a snug fit. Use bead of silicone sealant around connection points to ensure sealed fit.
B. Cap off any unused drain entry ports.
C. Secure Composting Unit to floor using bottom brackets.

That’s it!

Envirolet®/SG FlushSmart VF Installation

READ BEFORE INSTALLATION.

IMPORTANT
It is advised to completely read your owner's manual instructions carefully before beginning installation. Doing so will safe you time and allow for an easier installation overall.

Start Here

It is important that your Envirolet®/SG FlushSmart VF Composting Toilet System be installed correctly for proper operation and performance. This section is an introduction to the installation covering basics that you will want to learn about before beginning the actual installation process, such as positioning of the system.

Three Main Components

Your new Envirolet®/SG FlushSmart VF is comprised of three main components to create a complete system. Each plays an integral role in system operation.

VACUUM TOILET

VACUUM GENERATOR UNIT

ENVIROLET®/SG COMPOSTING UNIT

TYPICAL INSTALLATION

- In a typical installation, the **vacuum toilet** component connects to the **vacuum generator** component through the bathroom floor or wall (back or side wall).
- The **vacuum generator** then connects the toilet to the **Envirolet®/SG composting unit/tank** component.

SINGLE TANK SYSTEM

DOUBLE TANK SYSTEM

Below are some things to consider before beginning the installation process.

Position the System

Position the vacuum toilet, vacuum generator and Envirolet®/SG composting unit in an area that is free of obstructions (pipes, electric boxes, wires, etc.). Try to keep composting unit in area with an ambient temperature above 12°C (55°F) for optimum composting. Refer to the Winter Use section if you plan to use the system in freezing or near-freezing temperatures.

Protect from the Elements

For safety and performance, the Envirolet®/SG composting unit, vacuum generator and 12V power supply unit (and any other electric components) must sit horizontally on a flat dry surface and must be installed in a vented covered structure (work shop, shed, box, etc.) to protect from the elements (water, rain, snow, etc.) and to protect from electrical damage or hazard. Refer to the Safety Guidelines section for more info on safe installation and operation.

Envirolet®/SG FlushSmart VF: Maximum Distances Component-To-Component

Information on how far apart Envirolet®/SG FlushSmart VF components can be from one another.

PLEASE READ THIS SECTION CAREFULLY.

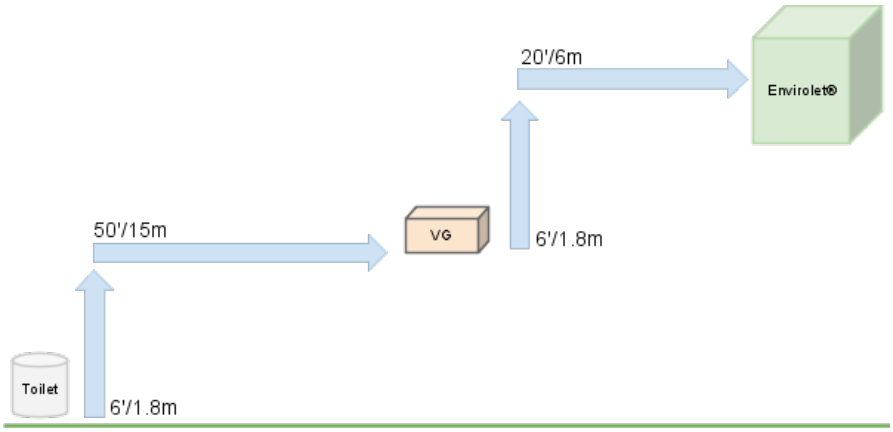
One of the great features of the Envirolet®/SG FlushSmart VF model is that it can flush up, down or sideways! Be sure to follow these maximum distances when installing your system.

MAXIMUM DISTANCES

In order to ensure proper system performance the following component-to-component maximum distances **must be** followed.

Note, the maximum overall height (vertical "flush up") is 12'/3.6m and the maximum overall distance (horizontal) is 70'/21m.

- The **head** from **vacuum toilet to vacuum generator** can be as much as **6'/1.8m** maximum.
  "Head" refers to the height from bottom of vacuum toilet to vacuum generator.
- The **vacuum toilet and vacuum generator** can be up to **50'/15m** apart maximum.
  Be sure to maintain maximum head distance (6'/1.8m).
- The **head** from **vacuum generator to Composting Unit** can be as much as **6'/1.8m** maximum.
  "Head" refers to the height from vacuum generator drain outlet to drain inlet on Composting Unit.
- The **vacuum generator and Composting Unit** can be up to **20'/6m** apart maximum.
  Be sure to maintain maximum head distance (6'/1.8m).



IMPORTANT

At this stage, you can place components *roughly* where they will be installed (positioning), but **do not attach to floor or connect to other system components until directed**.

IMPORTANT

Do not connect vacuum toilet or vacuum generator to Envirolet®/SG Composting Unit/Tank until instructed (after all components have been individually installed).

Envirolet®/SG FlushSmart VF: Composting Unit Installation

Installation instructions for the Envirolet®/SG FlushSmart VF composting unit.

PLEASE READ THIS SECTION CAREFULLY.

Important Notices

IMPORTANT

Do not connect Envirolet®/SG Composting Unit (tank) to the vacuum generator unit or to the vacuum toilet until instructed. This is after all components have been individually installed.

IMPORTANT

Use only use the supplied 1.5”/38mm flexible drain hose to connect vacuum generator unit. Do not use other drain pipe.

IMPORTANT

Do not remove the Paper Mat located in Envirolet®/SG composting unit. This is not packing material. It is an important component to proper system start-up.

WARNING

The vent system must always be securely attached to your Envirolet®/SG composting unit before any operation. Failure to comply could result in an unsafe electrical hazard.

90° Bends in Vent

IMPORTANT

It is recommended that the 100mm/4" vent pipe be installed straight up, with little or no angles/bends in the venting system. This will ensure proper vent draft and evaporation, and prevent any inside odour.

Do not install any 90° bends (or greater) in your vent installation.

Ready to Go!

It's time to begin installation of the composting unit component of your Envirolet®/SG FlushSmart VF System! Here are the main steps:

1. Position Envirolet®/SG Composting Unit
2. Connect flex vent to Composting Unit
3. Install rigid vent pipe (not supplied)
4. Connect flexible vent and rigid pipe
5. Attach Wind Turbine Ventilator
6. Seal all vent connections
7. Install drain
8. Connect three components of system

1. Position Envirolet®/SG Composting Unit

Locate in Covered Structure
Position the vacuum generator and Envirolet®/SG composting unit in a covered structure (work shop, basement, garden shed, utility shed, box, etc.) in area that is free of obstructions (pipes, electric boxes, wires, etc.).

Temperature
Try to keep composting unit in area with an ambient temperature above 12°C (55°F) for optimum composting. Refer to the Winter Use section if you plan to use the system in freezing or near-freezing temperatures.

Locate in Covered Structure

Position the Envirolet®/SG Composting Unit in a covered structure (work shop, basement, garden shed, utility shed, box, etc.) in area that is free of obstructions (pipes, electric boxes, wires, etc.).

Temperature

Try to keep Composting Unit in area with an ambient temperature above 12°C (55°F) for optimum composting. Refer to the Winter Use section if you plan to use the system in freezing or near-freezing temperatures.

Protect from the Elements

For safety and performance, the Envirolet®/SG composting unit, vacuum generator and power supply unit (and any other electric components) must sit horizontally on a flat dry surface and must be installed in a vented covered structure (work shop, basement, garden shed, utility shed, box, etc.) to protect from the elements (water, rain, snow, etc.) and to protect from electrical damage or hazard. Refer to the Safety Guidelines section for more info on safe installation and operation.

Directions

A. Place the Envirolet®/SG composting unit adjacent to the vacuum generator unit. Normally, the vacuum generator and Composting Unit will sit beside each other but can be up to 20'/6m apart maximum. Be sure to maintain head (vertical height) distance (1.8m/6' maximum). Refer to **Maximum Distances** section for more information.
B. Do not secure Envirolet®/SG Composting Unit or vacuum generator unit to ground until vent installation is complete. This will allow for any placement modifications, if required.

2. Connect Flex Vent to Composting Unit

- Place 4”/110mm Flex Vent pipe section over vent opening on the Top Panel of Envirolet®/SG Composting Unit (tank) using the supplied 4”/110mm stainless steel Gear Clamp.
- Tighten Gear Clamp over Flex Vent to secure to plastic opening for proper seal.
- Based on your individual installation requirements, you may wish to increase or decrease the length of the 100mm/4” Flex Vent pipe (4’/1.2m is standard).

IMPORTANT

Seal vent connection on Top Panel securely with 4”/110mm Gear Clamp and Silicone Sealant provided to prevent odours.

IMPORTANT

Install minimum of 12”/30cm of 4”/110mm Flexible Vent Pipe that connects composting unit to 4”/110mm rigid pipe section(s). This will prevent rigid pipe breakage due to possible ground shifting caused by freezing temperatures or other movement.

3. Install Rigid Vent Pipe (not supplied)

Rigid Vent

Not included, due to transportation costs, is 10’/3m to 20’/6m (for a typical installation) of rigid ABS or PVC Pipe that is required to complete vent installation. This rigid pipe travels up along the wall of your structure above the roof line (minimum 2’/0.6m) and is fitted with the included Wind Turbine Ventilator. The rigid pipe connects to the 4”/110mm Flex Vent Pipe via an attached 4”/110mm coupling provided. This low-cost rigid pipe can be easily acquired from your local dealer or at your local hardware, plumbing or home center.

- Determine length of 4”/110mm rigid vent pipe required for your installation. To properly determine length of rigid vent pipe required be sure to allow a minimum of 2’/0.6m – 3’/0.9m rigid vent pipe to extend above the structure roof line to ensure proper vent draft and maximum performance of the 4”/110mm Wind Turbine Ventilator.

- Position rigid pipe as close as possible to the vent exit on the Envirolet®/SG Composting Unit. **Again, it is very important to avoid any 90° bends in your vent installation.**

Attach rigid pipe securely to wall from just above Envirolet®/SG Composting Unit entire way up wall to above roof line. Each installation will vary significantly, depending on location requirements. For added performance insulate all rigid vent pipe.

4. Connect Flexible Vent and Rigid Pipe

Connect the flexible vent with supplied (Scandinavia only) 110mm Coupling to rigid pipe.

5. Attach Wind Turbine Ventilator

Attach the 4”/110mm Wind Turbine Ventilator to the top of the rigid vent pipe using straight coupling (not supplied). Secure the Wind Turbine Ventilator with silicone sealant and at least 3-4 tapping screws (not supplied).

IMPORTANT

Extend the 4”/110mm rigid vent pipe higher than 3’/0.9m minimum for any installation surrounded by high trees, hills, other structures and/or with a high roof peak and/or located in a valley.

6. Seal All Vent Connections

Seal all vent connections with silicone sealant. This is an important step because it will help prevent any odour leakage. Even a small hole can lead to odour escape, so please double check.

7. Install Drain

Connect one side of “T” portion of quick connect breather “T” to ½”/13mm drain (5’/152cm included standard) line that exits Compost Unit (bottom right-hand side when facing tank).

Important
Make sure open part of “T” (middle) is facing up to prevent air-lock.

- Connect other side of “T” to length of 13mm/1/2” drain line.
- Place end of drain line to an **acceptable drain site** (leach field, holding tank, liquid container, etc.). See **Draining Information** section for more details. Make sure there is a gravity drop the entire path from composting tank drain exit to drain site.
- Insulate drain line if there is a chance of freezing.

IMPORTANT
Please be sure to connect excess fluid drain to an acceptable drain site, according to local regulations.

8. Connect Three Components of System

Once all three components (vacuum toilet, Vacuum Generator, composting unit) are in place, you are ready to connect them! Please continue to **Connection & Set-Up** section for information connecting the components.

IMPORTANT
Do not attach Envirolet®/SG Composting Unit to floor/ground until completing system set-up.

Envirolet®/SG FlushSmart VF: Three Main Components Connection & Set-Up

Installation instructions for connection the three main components of the Envirolet®/SG FlushSmart VF System.

PLEASE READ THIS SECTION CAREFULLY.

Connection & Set-Up

⚠ IMPORTANT

Follow all safety guidelines before connecting and starting your Envirolet®/SG FlushSmart VF system.

Installation is almost complete! Now you have to **connect the three system components** to create the complete Envirolet®/SG FlushSmart VF System.

⚠ IMPORTANT

Please follow these steps carefully before attaching/fastening any component to the floor.

Connect Vacuum Toilet to Vacuum Generator

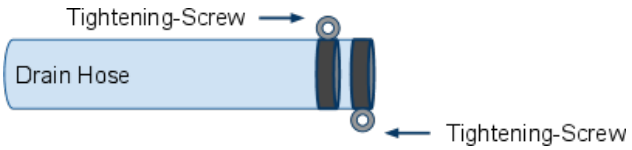
- Connect one end of 1.5”/38mm drain hose to vacuum toilet discharge, depending on model:

- "A - Above Floor Rear" - Connects to fitting at back of vacuum toilet in VF300 models and to cup fitting in VF700 models.
- "B - Below Floor" - Connects to included floor flange fitting below the bathroom floor.
- Apply included lubricant to inside of 1.5" flex drain hose and outside fittings to allow for easier connection.
- Use 2 x Gear Clamps for tight fit. It is essential that 2 be used. Each Gear Clamp should be installed with the tightening-screw directly opposite the other (12 o'clock and 6 o'clock) to ensure tight connection and proper vacuum seal.
- Place opposite end of 1.5"/38mm drain hose through bathroom wall (or floor) for "A" and "S" models in order to connect to Vacuum Generator Unit. "B" models are already below floor ready to connect to Vacuum Generator Unit.
- Connect opposite end of 1.5"/38mm drain hose to Vacuum Generator Unit drain inlet. Apply included lubricant to drain hose and outside fittings to allow for easier connection.
- Once again, use 2 x Gear Clamps for tight fit. It is essential that 2 are used. Each Gear Clamp should be installed with the tightening-screw directly opposite the other (12 o'clock and 6 o'clock) to ensure tight connection and proper vacuum seal.

- Make sure all connections are sealed tight. Vacuum toilet and Vacuum Generator should ideally not exceed maximum recommended distance. Refer to **Maximum Distances** section.

Connect Vacuum Generator to Composting System

a. Insert small end of 1.5"/38mm white plastic reducer coupling inside 1.5"/38mm drain hose. Apply included lubricant to drain hose and outside fittings to allow for easier connection.
b. Use 2 x Gear Clamps to seal tightly. It is essential that 2 are used. Each Gear Clamp should be installed with the tightening-screw directly opposite the other (12 o'clock and 6 o'clock) to ensure tight connection and proper vacuum seal.



c. Select left, right or top drain entry on Envirolet®/SG Composting Unit. This is where the drain hose will enter composting unit.
d. Connect white plastic coupling end of 1.5"/38mm drain hose to selected 1.5"/38mm drain inlet on Envirolet®/SG Composting Unit.
e. Secure coupling with silicone or PVC solvent to ensure proper seal (and prevent liquid or odour leak).
f. Ensure drain cap covers are secured tightly on unused drain inlets on Envirolet®/SG Composting Unit.
g. Connect other end of drain hose to Vacuum Generator Unit drain pump outlet.
h. Once again, use 2 x Gear Clamps for tight fit. It is essential that 2 are used. Each Gear Clamp should be installed with the tightening-screw directly opposite the other (12 o'clock and 6 o'clock) to ensure tight connection and proper vacuum seal.

2. Make sure all connections are sealed tight. Vacuum Generator and Envirolet®/SG Composting Unit should should ideally not exceed maximum recommended distance. Refer to **Maximum Distances** section.

Fasten Vacuum Toilet to Floor

⚠ IMPORTANT

All FlushSmart VF 300, 700 and 800 Series toilets must be connected with the included Water Regulator Supply to control water volume in toilet.

VF700 Series A & B Models

VF700 Series models feature an electronic push-button flush.

VF700 A & B Series

➢ "A" - Above Floor Rear (straight fitting)

or

- "B" - Below Floor (with right-angle fitting)

- Envirolet FlushSmart VF700 Series models include VF700 toilet and floor mounting cup kit.
- Position and install floor-mounting kit to floor position and install toilet to floor mounting kit.
- Make sure rubber "O"-ring around base of VF700 toilet is well lubricated with silicone grease and insert toilet base carefully in floor mounting cup to prevent pinching or damage "O"-ring.
- **Connect right-angle fitting to back of straight fitting that exits from back of toilet using CPVC solvent-cement to ensure tight fit.** Failure to solvent-cement plastic fittings will cause loss of vacuum and vacuum pump to run continuously.

⚠ IMPORTANT

The "A" - Above Floor Rear (straight fitting) or "B" - Below Floor (with right-angle fitting) plastic fitting must be solvent-cemented with CPVC into back of VF700 toilet drain outlet fitting located at rear bottom center of VF700 toilet.

Note:
Use service switch on back of VF700 toilet to open and close bowl trap for service use.

WALL MOUNTED SWITCH (VF700 SERIES ONLY)

A. **GREEN LIGHT:** INDICATES READY TO FLUSH
B. **RED LIGHT:** DO NOT FLUSH

Switch Operation

A. Push green switch button to flush toilet.
B. Red light turns on between flushes and vacuum generator starts, runs and shuts off on green light (approx 40 seconds)

VF300 Series A & B Models

VF300 Series models are manual pedal-flush.

VF300 A & B Series

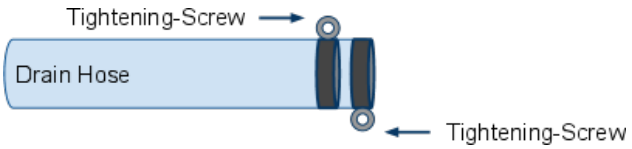
- "A" - Above Floor Rear (straight fitting)

or

- "B" - Below Floor (with right-angle fitting)

VF300 "A" Above Floor Rear (straight fitting)

A. The "A" model uses a direct toilet to 1.5" flex drain hose connection.
B. Position and install "A" - Above Floor Rear model toilet in bathroom.
C. Apply included lubricant to inside of 1.5" flex drain hose and outside fittings to allow for easier connection.
D. Use 2 x Gear Clamps for tight fit. It is essential that 2 be used. Each Gear Clamp should be installed with the tightening-screw directly opposite the other (12 o'clock and 6 o'clock) to ensure tight connection and proper vacuum seal.



E. Do not use solvent-cement (CPVC) on VF300 "A" models.

VF300 "B" - Below Floor (with right-angle fitting)

A. The "B" model rear-below floor uses below floor cup.

B. The “B” model requires straight plastic fitting to be connected to the below floor cup - **use solvent-cement (CPVC) to seal straight plastic fitting (on this “B” model only).**
C. Position and install floor mounting kit to floor position and install toilet to floor mounting kit
D. Make sure rubber “O”-ring around base of VF300 “B” model toilet only is well lubricated with silicone grease and insert toilet base carefully in below floor mounting cup to prevent pinching or damage to “O”-ring.
E. Failure to solvent cement plastic fittings will cause loss of vacuum and vacuum pump to continuously run.

Important
In below floor models (“B”), ensure that the rubber seal between vacuum toilet and floor flange is liberally lubricated to ensure proper vacuum seal.

Important
Please refer **only** to Envirolet®/SG instructions for the following:

- Wiring (see Plug & Play section)
- Draining (see Draining section)
- Operation (See Start-Up & Operation section)
- “Tank” connections (this section)

Fasten Vacuum Generator Unit and Composting Unit to Floor

A. Fasten Vacuum Generator Unit to floor to prevent movement with floor mounting brackets found on unit.

Important

Please refer **only** to Envirolet®/SG instructions for the following:

- Wiring (see Plug & Play section)
- Draining (see Draining section)
- Operation (See Start-Up & Operation section)
- “Tank” connections (this section)

B. Fasten Envirolet®/SG Composting Unit to floor to prevent movement with floor mounting brackets found on unit.

Connect Vacuum Generator to AC Power Supply (AC Models only)

A. Connect Vacuum Generator Unit to Power Supply Unit (not included with 12VDC models). Refer to Plug & Play instructions for wiring diagrams.
B. Install Power Supply 1-3‘ (0.3-0.9m) off floor to keep dry and away from dust and near to vacuum generator and composting unit.
C. Black wire is always negative (-).
D. All wires are connected to plastic pin snap-lock fasteners for easy connection

VF700 Series (4 wire connections)

- Connect red and black wire connection from 12v power supply to vacuum generator.
- Connect red and black wire connection from 12v power supply to toilet.
- Connect black and green wire from vacuum generator to toilet.
- Connect wire from wall-mounted switch to toilet.
- Plug in AC power plug only on power supply to certified and grounded AC wall outlet only

VF300 Series (1 wire connection)

- Connect red and black wire from 12v power supply to vacuum generator.
- Plug in AC power plug only on power supply to certified and grounded AC wall outlet only.

Connect Composting System to Power

A. Connect AC Electric model Envirolet®/SG Composting Units to grounded, approved and certified 120VAC or 230VAC Electric power receptacle. Be sure to follow all safety instructions. Refer to Plug & Play instructions for wiring diagram.
B. Connect DC model Envirolet®/SG Composting Units to 12V power source. Be sure to follow all safety instructions. Refer to Plug & Play instructions for wiring diagram.

Envirolet®/SG FlushSmart VF: Plug & Play

Envirolet®/SG FlushSmart VF Systems are Plug & Play ready-to-install. Document link for printing • Short URL: http://bit.ly/fsvfpp

Plug & Play Wiring Connection

- Envirolet®/SG FlushSmart VF come Plug & Play ready-to-go!
- All the wiring is comprised of colour-coded snap-together connectors to make it simple.
- Please refer to these diagrams for connection instructions (links open PDF file).

For both the **Composting Unit** and **Toilet/Generator**, choose:

Series (300 or 700) and
Power Type

Component	300 Series	700 Series	12VDC	120VAC	230VAC	Power Supply	File/Link
Composting Unit							Envirolet FlushSmart Wiring Model 300 and 700 Composting Unit 230V.pdf
Composting Unit							Envirolet FlushSmart Wiring Model 300 and 700 Composting Unit 120V.pdf
Composting Unit							Envirolet FlushSmart Wiring Model 300 and 700 Composting Unit 12VDC.pdf
Toilet/Generator							Envirolet FlushSmart Wiring Model 300 with 230V_12V Power Supply.pdf
Toilet/Generator							Envirolet FlushSmart Wiring Model 700 with 120_12V Power Supply.pdf
Toilet/Generator							Envirolet FlushSmart Wiring Model 300 with 120V_12V Power Supply.pdf
Toilet/Generator							Envirolet FlushSmart Wiring Model 700 with 230_12V Power Supply.pdf
Toilet/Generator							Envirolet FlushSmart Wiring Model 700.pdf
Toilet/Generator							Envirolet FlushSmart Wiring Model 300.pdf

Envirolet®/SG FlushSmart VF: Using Less Water

Envirolet®/SG FlushSmart VF uses less water!

Pre-Set Water Volume Control Regulator

Your toilet already uses minimal amounts of water to flush. The included Pre-Set Water Volume Control Regulator further reduces water consumption by up to 60%.

Envirolet®/SG FlushSmart VF Composting Toilet Systems are equipped with a preset in-line (water supply) Water Volume Control. Regulator. This pre-set Water Control Regulator dramatically reduces water in the Envirolet®/SG FlushSmart VF toilet bowl to 0.2 Liters or 60% less water per flush. From a previous low of 0.5L to now an amazing micro low flush amount of 0.2L per flush or 60% less water per flush.

Directions

- Connect 5/8” (15.87 mm) end of water supply to vacuum toilet, then connect 3/8” (9.525mm) end of water supply to a proper fitting on water pipe.
- The Water Control Regulator is preset in the 5 and/or 11 o’clock or position indicator 573.

Flush Notes

You will find under normal flush operation that no additional water is required, however if additional water is required to flush, then use the following operating instructions:

VF700 Models
If more water is required, then use the Electronic Flush Switch and depress the Add Water Position for about 2-3 seconds.

VF300 Models
If more water is required, then simply lift up the foot pedal flush and add small amount of water.

Testing Toilet Flush

When the toilet is connected to the remote Envirolet Compost Unit (after next section), you will want to test the flush. Please read the following regarding this test.

IMPORTANT

If you plan to test vacuum toilet and Vacuum Generator with repeated flushing to see if proper flush is occurring, please connect outlet hose to pail/container. Excessive water added to Composting Tank is not advised as it may liquefy initial Starter Kit material and Paper Mat.

Priming the Vacuum Generator

- You need to “prime” the vacuum generator for it to function properly.
- Priming essentially means adding enough water to the vacuum generator to create enough “vacuum” in the drain line in order to get the vacuum generator to stop running (i.e., so it shuts off between flushes).
- To do this, keep adding water to the vacuum generator via flushes until the vacuum generator stops running after approximately 30-45 seconds.
- When it stops running the vacuum generator is primed and ready to go.

Draining & Typical Drain Pit Design

Draining information and typical drain pit design.

PLEASE CHECK LOCAL REGULATIONS REGARDING DRAINING.

Some systems are fitted with an excess liquid drain kit. This drain **must gravity connect** to a leaching pit or acceptable drain site for proper system performance.

Systems with drain kit included standard:

- All Non-Electric models.
- All 12VDC models.
- All water flush (Low Water Remote and FlushSmart VF) models.

Important - Add Drain to AC Waterless System, If Required

As a rule of thumb, AC Electric Waterless models (e.g., Envirolet®/SG MS10 and Envirolet WRS AC) do not require a drain. However, it is recommended to install an excess liquid drain on any model (including AC Electric Waterless models that normally do not require a drain), if any of the following applies to the installation:

- System is installed in any continuous or heavy use application (i.e., residential use, commercial use, public use).
- System is going to be used without power or (due to power outages or for power saving).
- System is not going to be used in Normal Mode/Position 2 (for power saving) all of the time when in use.

Envirolet®/SG Waterless Self-Contained and Waterless Remote Systems

Non-Electric & 12VDC battery powered Waterless Self-Contained Systems and Waterless Remote Systems are equipped with a Drain Kit and must be connected to an acceptable drain site. This is optional on AC Electric Waterless models.

Gravity connect drain line exiting Envirolet®/SG System in the following method:

- Connect to an acceptable* black water drain pit/site (see instructions for a typical design below)
- *Or*, connect to a holding tank (will require periodic emptying to proper disposal site).
- *Or,* connect to a 5 gallon plastic container (will require periodic emptying to proper disposal site).

A drain pit is ideal where possible.

In order to allow for proper flow the drain line must be **gravity connected its entire path** from toilet system to drain site. Ensure that Quick Connect “T” is used with the breather tube pointing upwards to prevent “air lock” or drain blockage.

Envirolet®/SG Low Water Remote and FlushSmart VF Flush Systems

All Low Water Remote and FlushSmart VF Systems are equipped with a Drain Kit.

Gravity connect drain line exiting Envirolet®/SG System in the following method:

- Connect to an acceptable* black water drain pit/site (see instructions for a typical design below)
- *Or*, connect to a holding tank (will require periodic emptying to proper disposal site).

- *Or,* connect to a 10+ gallon plastic container (will require periodic emptying to proper disposal site).

A drain pit is ideal where possible.

A. In order to allow for proper flow the drain line must be **gravity connected its entire path** from toilet system to drain site.
B. Ensure that Quick Connect "T" is used with the breather tube pointing upwards to prevent "air lock" or drain blockage. See image above in Waterless section.

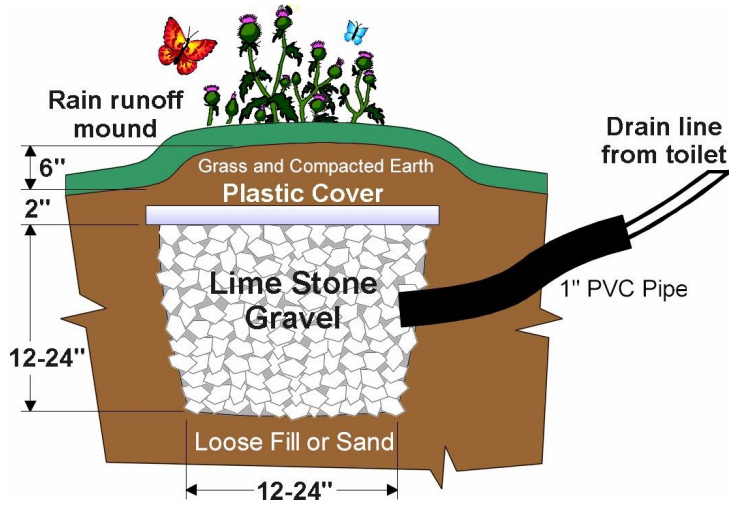
Important

* Be sure to check local regulations regarding acceptable drain pits/sites in your area.

TYPICAL DRAIN PIT DIRECTIONS:

These are instructions for the creation of a *typical* drain pit. Check local regulations.

- Dig a drain pit approximately 1'/0.3m to 3'/1m in depth and 1'/0.3m to 3'/1m in diameter with 2'/0.6m or more of loose fill below (earth, sand and/or crushed rock).
- Fill the drain pit with lime stone gravel.
- Gravity feed a length of 1"/25mm PVC pipe to the center layer (1/3 depth) of the lime stone gravel.
- Now gravity feed the Drain Line provided with the toilet system and insert the end (about 6"/15cm) into the 1"/25mm (or more) wide PVC pipe.
- Cover the top of the lime stone pit with a plastic cover and 2"/50mm of earth.
- For rain protection, create a 6"/15cm mound (compacted earth and/or grass) to allow for rain run off.
- Make sure you install the drain pit approximately 50'/15m or more away from any water source, 60'/18m or more away from any drinking or other water source or well and away from any high water table. Please check local regulations.



Similar drain pits are commonly referred to as leaching pits, cesspools, dry wells, gray (or grey) water fields (for sink/shower waste water), filter beds or French drains depending on your location.

Envirolet®/SG System Winter Use

Envirolet®/SG Systems can be used in winter applications as long as certain precautions are taken to ensure for proper performance. Each system type has some specific requirements. Read the information for your system type.

Need Help?

It is important that your system is properly winterized for proper performance. Please be sure to contact Sancor for additional information or support for the winter operation of your Envirolet®/SG System.

Envirolet®/SG Waterless Self-Contained Winter Use

IMPORTANT

Your Envirolet®/SG Waterless Self-Contained System can be used during winter, cold or freezing conditions. It does not use water to flush and therefore less precaution (compared to water flush models) must be taken before using in winter due to concerns with freezing. However, following some simple winterizing recommendations will assist you in overall better performance, operation and protection during cold weather use.

WINTER USE REQUIREMENTS

The following is **required** for your Envirolet®/SG Waterless Self-Contained System if operated during winter, freezing or cold weather:

- During **periodic winter use**, the structure (bathroom, "outhouse," work shop, garage, basement, etc.) that houses the Envirolet®/SG Waterless Self-Contained System should be well insulated. Heating the structure is not normally required but is recommended if possible.
- If you do intend to use your system for **extended lengths** of time in the winter or at temperatures below freezing (-0°C/32°F) or close to below freezing, please ensure that all components are heated, well insulated, kept dry and protected to prevent freezing and prolong the composting process.
- The Envirolet®/SG System should be left, protected from the elements, inside a structure (all seasons). Inside structure, position Envirolet®/SG System on top of floor rug, rubber mat or sheet of Styrofoam insulation to prevent ground heat transfer (i.e., heat from System to cold floor).
- The ½" drain line (standard on Non-Electric and 12VDC models) that connects the Envirolet®/SG Waterless Self-Contained System to your acceptable drain site (e.g., leaching pit) should be well insulated, buried and protected to prevent freezing. If this line is able to freeze it will not drain so care must be taken prevent this.
- Insulate all vent components. This includes inside vent pipe.
- Keep roof vent and Wind Turbine Ventilator (or Rain Cap) free of ice and snow to allow for proper air-flow and to prevent snow, ice or water entering system via opening.

Composting Unit Note:

The Envirolet®/SG Waterless Self-Contained System compost unit **will not** be damaged if left unheated over winter during non-use. It is made from durable polyethylene plastic and will not crack or break and comes with a Lifetime Warranty.

WARNING!

Do not add anti-freeze or any other chemicals to prevent freezing. This will harm the composting process and require complete system clean out and re-start.

Envirolet®/SG Waterless Remote Winter Use

IMPORTANT

Your Envirolet®/SG Waterless Remote System can be used during winter, cold or freezing conditions. It does not use water to flush and therefore less precaution (compared to water flush models) must be taken before using in winter due to concerns with freezing. However, following some simple winterizing recommendations will assist you in overall better performance, operation and protection during cold weather use.

WINTER USE REQUIREMENTS

The following is **required** for your Envirolet®/SG Waterless Remote System if operated during winter, freezing or cold weather:

During **periodic winter use**, the structure ("winter box," crawl space, basement, etc.) that houses the composting unit of the Envirolet®/SG Waterless Remote System should be well insulated. Heating the structure is not normally required but is recommended if possible.

If you do intend to use your system for **extended lengths** of time in the winter or at temperatures below freezing (-0°C/32°F) or close to below freezing, please ensure that all components are heated, well insulated, kept dry and protected to prevent freezing and prolong the composting process.

Inside structure, position Envirolet®/SG compost unit on top of rubber mat or sheet of Styrofoam insulation to prevent ground heat transfer (i.e., heat from compost unit to cold floor).

The composting unit (tank) can be left exposed under your structure without damage, however it is recommended for added protection that you cover any outside exposed components with a plastic sheet or equivalent to keep dry from snow, ice and water. This is highly recommended for DC and AC electric models to protect electrical components. Housing the unit in a "winter box" (a simple plywood box that is insulated with Styrofoam sheets) is an ideal solution.

The ½" drain line (standard on Non-Electric and 12VDC models) that connects the Envirolet®/SG Waterless Remote compost unit to your acceptable drain site (e.g., leaching pit) should be well insulated, buried and protected to prevent freezing. If this line is able to freeze it will not drain so care must be taken prevent this.

Insulate all flex and rigid vent components (e.g., flex vent pipe, rigid vent pipe).

Keep roof vent and Wind Turbine Ventilator free of ice and snow to allow for proper air-flow and to prevent snow, ice or water entering system via opening.

Composting Unit Note:

The Envirolet®/SG Waterless Remote System compost unit **will not** be damaged if left unheated over winter during non-use. It is made from durable polyethylene plastic and will not crack or break and comes with a Lifetime Warranty.

WARNING!

Do not add anti-freeze or any other chemicals to prevent freezing. This will harm the composting process and require complete system clean out and re-start.

Envirolet®/SG Low Water Remote Winter Use

IMPORTANT

Your Envirolet®/SG Low Water Remote System uses water to flush and therefore **special care** must be taken before using in winter due to concerns with freezing.

If you do intend to use your system in the winter or at temperatures below freezing (-0°C/32°F) or close to below freezing, please ensure that all components are heated, well insulated, kept dry and protected to prevent freezing. This includes low water toilet, Envirolet®/SG composting unit, venting system and all drain lines/connections.

WINTER USE REQUIREMENTS

The following is **required** for your Envirolet®/SG Low Water Remote System if operated during winter, freezing or cold weather:

All 3" Flex Drain Pipe (connecting low water toilet to Envirolet®/SG compost unit) should be wrapped with heated cable and well insulated to prevent freezing. **Do not use any chemical anti-freeze in flush lines as this will harm to composting process and require complete system clean and re-start.**

A winter heat & insulation kit is available from Sancor.

- The structure ("winter box," shed, work shop, basement, etc.) that houses the composting unit of the Envirolet®/SG Low Water Remote System should be **heated**.
- Inside structure, position Envirolet®/SG compost unit on top of rubber mat or sheet of Styrofoam insulation to prevent ground heat transfer (i.e., heat from compost unit to cold floor).
- The ½" drain line that connects the Envirolet®/SG Low Water Remote compost unit to your acceptable drain site (e.g., leaching pit) should be well insulated, buried and protected to prevent freezing. If this line is able to freeze it will not drain so care must be taken prevent this.
- In order to prevent freezing damage, make sure your water supply line (from your water source) that connects to the vacuum toilet is heated. Or, disconnect water supply and manually pour only a small amount of water (0.5L) per flush.
- If leaving the premise (in particular the bathroom) unheated ensure that the vacuum toilet bowl and bowl seal are completely dry to prevent any freezing damage to the ceramic and rubber seal. You can wipe the bowl and seal dry with a cloth. This should be done anytime you leave the premises (i.e., for the week or the entire season).
- Insulate all flex and rigid vent components (e.g., flex vent pipe, rigid vent pipe).
- Keep roof vent and Wind Turbine Ventilator free of ice and snow to allow for proper air-flow and to prevent snow, ice or water entering system via opening.

Composting Unit Note:

The Envirolet®/SG Low Water Remote System compost unit **will not** be damaged if left unheated over winter during non-use. It is made from durable polyethylene plastic and will not crack or break and comes with a Lifetime Warranty.

WARNING!

Do not add anti-freeze or any other chemicals to prevent freezing. This will harm the composting process and require complete system clean out and re-start.

You may also want to refer to the low water toilet (510+) manual for more specific info on winterizing this component.

Envirolet®/SG FlushSmart VF Winter Use

IMPORTANT

Your Envirolet®/SG FlushSmart VF System uses water to flush and therefore **special care** must be taken before using in winter due to concerns with freezing.

If you do intend to use your system in the winter or at temperatures below freezing (-0°C/32°F) or close to below freezing, please ensure that all components are heated, well insulated, kept dry and protected to prevent freezing. This includes vacuum toilet, vacuum generator and the Envirolet®/SG FlushSmart VF composting unit, venting system and all drain lines/connections.

Winter Use Requirements

The following is **required** for your Envirolet®/SG FlushSmart VF System if operated during winter, freezing or cold weather:

All 1.5" Flex Drain Pipe (connecting vacuum toilet to vacuum generator *and* vacuum generator to Envirolet®/SG compost unit) should be wrapped with heated cable and well insulated to prevent freezing. **Do not use any chemical anti-freeze in flush lines as this will harm to composting process and require complete system clean and re-start.**

50'/15m winter heat & insulation kits are available from Sancor to accomplish this easily:

1. The structure ("winter box," shed, work shop, basement, etc.) that houses the composting unit of the Envirolet®/SG FlushSmart VF System, vacuum generator and power supply should be **heated**.
2. Inside structure, position Envirolet®/SG compost unit on top of rubber mat or sheet of Styrofoam insulation to prevent ground heat transfer (i.e., heat from compost unit to cold floor).
3. The ½" drain line that connects the Envirolet®/SG FlushSmart VF compost unit to your acceptable drain site (e.g., leaching pit) should be well insulated, buried and protected to prevent freezing. If this line is able to freeze it will not drain so care must be taken prevent this.
4. In order to prevent freezing damage, make sure your water supply line (from your water source) that connects to the vacuum toilet is heated. Or, disconnect water supply and manually pour only a small amount of water (0.2L) per flush.
5. If leaving the premise (in particular the bathroom) unheated ensure that the vacuum toilet bowl and bowl seal are completely dry to prevent any freezing damage to the ceramic and rubber seal. You can wipe the bowl and seal dry with a cloth. This should be done anytime you leave the premises (i.e., for the week or the entire season).
6. Insulate all flex and rigid vent components (e.g., flex vent pipe, rigid vent pipe). In Double Tank models this must be done for both composting units.
7. Keep roof vent and Wind Turbine Ventilator free of ice and snow to allow for proper air-flow and to prevent snow, ice or water entering system via opening.

Composting Unit Note:
The Envirolet®/SG FlushSmart VF compost unit **will not** be damaged if left unheated over winter during non-use. It is made from durable polyethylene plastic and will not crack or break and comes with a Lifetime Warranty.

WARNING!

Do not add anti-freeze or any other chemicals to prevent freezing. This will harm the composting process and require complete system clean out and re-start.

Rated Capacity – Maximum Use

Each type or model of Envirolet®/SG Composting Toilet Systems has a rated capacity. Do not use above these rated capacities except for brief periods of time.

IMPORTANT

Any system that will be used above the rated capacity, even for short periods of time, should have an excess liquid drain installed.

Look for your system/model below and use within capacity.

Rated Capacity Chart

System	Model/Series	Power	Users/Day (FULL-TIME)	Users/Day (PART-TIME)	Drain Required?
Envirolet Waterless Self-Contained	Basic Plus	Non-Electric	2	4	Yes
Envirolet Waterless Self-Contained	DC12	12VDC	4	6	Yes
Envirolet Waterless Self-Contained	MS10	AC Electric	6	8	**No**[1]
Envirolet Waterless Remote	NE	Non-Electric	4	6	Yes
Envirolet Waterless Remote	DC	12VDC	6	8	Yes
Envirolet Waterless Remote	AC	AC Electric	8	10	**No**[1]
Envirolet Low Water Remote	NE	Non-Electric	4	6	Yes
Envirolet Low Water Remote	DC	12VDC	6	8	Yes
Envirolet Low Water Remote	AC	AC Electric	8	10	Yes
Envirolet FlushSmart VF AC	300 700 800	AC Electric	8	10	Yes
Envirolet FlushSmart VF DC	320 720 820	12VDC	6	8	Yes
Envirolet FlushSmart VF AC	350 750 850	AC Electric	16 (8/tank)	20 (10/tank)	Yes[2]
Envirolet FlushSmart VF DC	370 770 870	12VDC	12 (6/tank)	16 (8/tank)	Yes

Footnotes

1 Drain is not required under normal use. Please refer to important message below for more info.

IMPORTANT - ADD DRAIN TO AC WATERLESS SYSTEM, IF REQUIRED

As a rule of thumb, AC Electric Waterless models (e.g., Envirolet®/SG MS10 and Envirolet WRS AC) do not require a drain. However, it is recommended to install an excess liquid drain on any model (including AC Electric Waterless models that normally do not require a drain), if any of the following applies to the installation:

- ✓ System is installed in any continuous or heavy use application (i.e., residential use, commercial use, public use).
- ✓ System is going to be used without power or (due to power outages or for power saving).
- ✓ System is not going to be used in Normal Mode/Position 2 (for power saving) all of the time when in use.

2 No drain operation is possible with maximum of 4 people/day. Ask for details.
3 Available in Norway only.

Notes

- Users/day refers to the number of users per day at three uses each per day.
- Full-time use refers to permanent type use (residential or business).
- Part-time use refers to cottage-type use (seasonal).
- Rated capacities only apply if system is operated as directed. For example, with AC Electric models the fans and heater should be on at all times when the system is in use.

- Refer to drain section for proper drain installation.

Use & Care – Maintaining Your System

Envirolet®/SG Composting Toilet System Use & Care including system start-up, power controls and normal operation instructions.

PLEASE READ THIS SECTION CAREFULLY BEFORE USING SYSTEM.

WARNING

Please follow all safety guidelines when using your Envirolet®/SG Composting Toilet System.

IMPORTANT

Complete entire system installation before system start-up and use is initiated.

Do Not Add!

DO NOT ADD CERTAIN ITEMS	• Your Envirolet®/SG is designed only for "blackwater" (waste water) and other additives (peat moss, soil, etc.) that are to be added only as directed. • This is a list of items that should not be added to your Envirolet®/SG Composting Toilet System for safety, operation and performance. The addition of any of these items may be a safety hazard and will void System warranty.
DO NOT ADD THESE ITEMS TO YOUR COMPOSTING TOILET SYSTEM	• Flammable materials (cigarettes, matches, gasoline, hot ashes, etc.). • Chemicals (bleach, toilet bowl cleaner, detergents, septic tank chemicals, anti-freeze, etc.). • Oils or Greases (cooking oil, motor oil, grease, cooking fats, etc.). • Meat or meat bi-products. • Female sanitary products (tampons, pads, etc.). • Grey water (sink water, shower water, dishwasher water, etc.).
INFORM ALL GUESTS	• It is essential that this list be followed. Be sure to inform all guests of these rules. Printing this page and posting in bathroom near toilet is suggested

Warning Labels

Printing this page and posting in bathroom near toilet is suggested.

WARNING!
Do not add glowing or burning materials to composting toilet system (cigarettes, matches, ashes, etc.) as this is a fire hazard.

VARNING!
Kasta ej ej glödande eller brinnande material såsom cigarrettfimpar och aska i Komposttoalett-systemet. Detta kan utgöra en brandfara.

VARNING!
Kast ikke glødende eller brennende materiale i kompostsystemet, da dette kan utgjøre en brannfare.

VAROITUS!
Älä heitä palavaa tai hehkuvaa materiaalia (tuhkaa, tupakantumppeja, yms.) kompostointijärjestelmään, koska tämä voi aiheuttaa palovaaran.

Rated Capacity

- Your Envirolet®/SG Composting Toilet System has a maximum rated capacity.
- Do not use above these rated capacities.
- Refer to Rated Capacity section for list of models and capacities.

Operation is Easy

- Your Envirolet®/SG Composting Toilet System is easy to operate
- Please follow all directions for proper performance.
- Be sure to follow all safety precautions listed in this manual. Refer to Safety Guidelines section for more information.
- Familiarize yourself with basic operation steps before use.

Contents

1. System Use & Care Overview

This chart is an overview of proper system operation. Specific details follow this section.

System Use & Care Chart

#	Task	Start of Season	Daily	Weekly	Mid-Season	Pre-Winter Season	End of Season
1	Add Starter Mix	X					
2	Add Daily Mix		X				
3	Add Daily Mix (Weekly Use)			X			
4	Add Compost Accelerator	X		X	X	X	X
5	Use Aerator Bar	X		X			X
6	Clean drain line and filters				X		X
7	Check electric components						X
8	Empty System	X					
9	Check all air and liquid seals				X		X
10	Winterize system					X	

- Start of Season refers to the “starting point” for *your* Envirolet®/SG. Typically for cottage-type use this is in the spring.
- Daily refers to any day when the system is in use.
- Mid-Season refers to the approximate half-way point of system use. For typical cottage use this will often be mid-summer.
- Other additives can be substituted for Daily Mix when required. Acceptable additives include dark soil, peat moss, coffee grounds, cocoa shells, coconut husks, wood shavings (not cedar) and sawdust.
- Any winterizing precautions that are required should be completed well before winter season begins (Pre-Winter Season), i.e., fall season.

2. Start of Season: System Start-Up

Complete all installation, including venting, draining, etc., **before** beginning Initial System Start-Up.

SYSTEMS THAT REQUIRE EMPTYING START HERE

Empty System

Ignore this step and begin at step 4 if the system is new and has not yet been used.
Typically, you will empty your system at the start of the season. For full-time use or heavier use emptying periods will vary.
Refer to **Emptying Instructions** section for instructions.
Clean drain line and filters
After emptying and before replacing bottom panel, be sure to inspect your drain line and filters (tray and drain) in systems with excess liquid drains installed.
Ensure that drain and filter cloths are free of debris. Replace if required.

CHECK ALL AIR AND LIQUID SEALS

- After emptying and replacing bottom panel, be sure to inspect that all openings in system are completely sealed for liquid and air.
- Make sure bottom panel is properly attached and that all areas that silicone-sealed have a proper seal.

NEW SYSTEMS START HERE

Add Premix Starter Mix to Envirolet®/SG Composting System

For Waterless Self-Contained models:
Open toilet seat, open trap and remove bowl to add.
Spread contents as evenly as possible over Paper Mat in system. If Paper Mat was accidentally removed, please spread single-ply toilet paper over Manifold Grid. Be careful to avoid Mulcherator cutting blades.
For Waterless Remote, Low Water Remote and FlushSmart VF models:
Remove Service Panel on composting unit/tank to add.
Spread contents as evenly as possible over Paper Mat in system. If Paper Mat was accidentally removed, please spread single-ply toilet paper over Manifold Grid. Be careful to avoid Mulcherator cutting blades.
Low Water Remote and FlushSmart VF models will have 2 bags of Starter Mix to add. Use both.
Add a small glass (8oz/235ml) of **warm water** over Starter Mix inside system.
Replace bowl and close toilet seat (Waterless Self-Contained models) or replace Service Panel on composting unit (Waterless Remote, Low Water Remote and FlushSmart VF models).

Power up system! If system is not plugged in, plug it in now. Fans will start to turn.

DC and AC Electric models:

- Turn Control Switch to Normal Mode in Position 2.
- System should be left in Position 2 for best performance. More about operation modes in Power Control and Daily Operation sections.
- In FlushSmart VF models, turn on the vacuum generator unit.

Non-Electric models:

Not applicable.

Your Envirolet®/SG Composting Toilet System is now ready to use!

Please follow all operation guidelines for proper system performance and familiarize yourself with basic operation steps (below) before use.

3. Composting Unit Power Control

Envirolet®/SG AC Electric and 12VDC Systems are equipped with a 2-Position toggle power Control Switch that controls the electric components in the Envirolet Works-in-a-Drawer™ Box. Non-Electric models The switch is located on the Top Panel of the Compost Unit. Please familiarize yourself with the information about your system below.

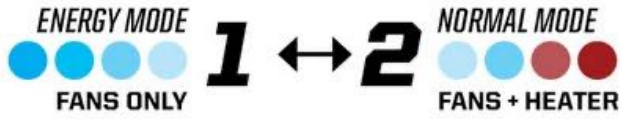
Non-Electric Systems

Not applicable. Non-Electric models do not use any power (unless an optional 12VDC or AC Electric in-line Turbo Fan has been installed).

AC Electric Systems

Envirolet®/SG AC Electric Systems are equipped with a 2-Position toggle power Control Switch that controls the electric components in the Envirolet Works-in-a-Drawer™ Box.

Waterless Self-Contained AC Electric models label:



Waterless Remote, Low Water Remote and FlushSmart VF AC Electric models label:

AC Electric Switch Operation

POSITION 2 - SYSTEM IN USE
NORMAL OPERATING MODE

- Keep the control toggle switch to Position 2 for normal everyday use. The heater is thermostatically-controlled and will turn on and off automatically as required.
- Position 2 operates both fans (2) and a thermostatically controlled heater.

POSITION 1 - NOT IN USE FOR 1-4 WEEKS
ENERGY MODE

- When leaving the system (e.g., from weekend-to-weekend) or if the toilet will not be in use you can move the Control Switch to Position 1.
- This mode will conserve energy while maintaining the optimum Automatic Six-Way Aeration™ performance.
- Position 1 operates the dual fans (2) only. Heater does not operate in this mode. This mode helps maximize performance (aeration & evaporation) when you are absent and is highly recommended when you are not using your system for short periods of time 1 to 4 weeks.
- It is important to remember that your system should be left in Position 2 all or most of the time for best performance.

OFF - NOT IN USE FOR MORE THAN 4 WEEKS

- For extended periods of non-use (more than 4 weeks) turn system off by disconnecting the power plug.
- It is not advised to use the system with the power off. Even though the Wind Turbine Ventilator will continue to draw air from the system, the static fans can create an impedance in the vent line that will slow evaporation and air flow. Turn system back on if it will be used.

FlushSmart VF models

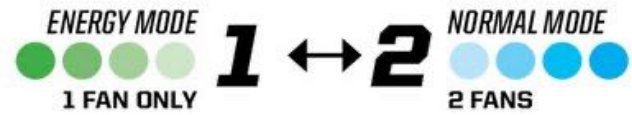
Always turn the vacuum generator off when leaving your FlushSmart VF system for extended periods (e.g., weekend-to-weekend). This prevents the vacuum generator from turning on when you are away. However, you can still continue to operate the Envirolet®/SG FlushSmart VF Composting Unit in Energy Mode/Position 1 (fans only) during these times.

12VDC Systems

Envirolet®/SG 12VDC Systems are equipped with a 2-Position toggle power Control Switch that controls the electric components in the Envirolet Works-in-a-Drawer™ Box.

Your 12VDC Battery System will operate in either a powerful dual fan (2) or single fan (1) mode. To conserve energy, your 12VDC Battery System does not use a heater.

Waterless Self-Contained AC Electric models label:



NOTE

Red “neon” light on Waterless Self-Contained Systems switch (North American models only) does not light on 12VDC models.

Waterless Remote, Low Water Remote and FlushSmart VF 12VDC models label:

12VDC Switch Operation

POSITION 2 - SYSTEM IN USE
NORMAL OPERATING MODE

- Position 2 operates both fans (2).
- Keep the control toggle switch to Position 2 for normal everyday use.

2 Fans Battery Performance

- During optimum performance or continuous operation (2 Fans for 24 hours/day), your 12VDC Battery System will operate for up to 21 days or 10 weekends off the recommended 12VDC (220AMP) battery alone.
- Battery not included.
- Different batteries can be produce varying results.
- An attached solar power system can provide extended or continuous operation and will keep batteries recharged.

POSITION 1 - NOT IN USE FOR 1-4 WEEKS
ENERGY MODE

- When leaving the system (e.g., from weekend-to-weekend) or if the toilet will not be in use you can move the Control Switch to Position 1.
- Position 1 operates only 1 fan. This mode will conserve energy while maintaining the optimum Automatic Six-Way Aeration™ performance.
- It is important to remember that your system should be left in Position 2 all or most of the time for best performance.

1 FAN BATTERY PERFORMANCE

- During energy saving operation (2 Fans for 12 hours + 1 Fan for 12 hours), your 12VDC Battery System will operate for up to 28 days or 14 weekends off the recommended 12VDC (220AMP) battery system alone.
- Battery not included.
- Different batteries can be produce varying results.

- An attached solar power system can provide extended or continuous operation and will keep batteries recharged.

OFF - NOT IN USE FOR MORE THAN 4 WEEKS

- For extended periods of non-use (more than 4 weeks) turn system off by disconnecting the battery terminals.
- It is not advised to use the system with the power off. Even though the Wind Turbine Ventilator will continue to draw air from the system, the static fans can create an impedance in the vent line that will slow evaporation and air flow. Turn system back on if it will be used.

FlushSmart VF models

Always turn the vacuum generator off when leaving your FlushSmart VF system for extended periods (e.g., weekend-to-weekend). This prevents the vacuum generator from turning on when you are away. However, you can still continue to operate the Envirolet®/SG FlushSmart VF Composting Unit in Energy Mode/Position 1 (single fan only) during these times.

Important Battery Facts

- If leaving battery(s) unattended during winter or cold weather conditions, disconnect battery power to system and remove battery(s) to warm area to protect battery(s) from damage.

4. Daily Operation

There are a few daily operating requirements to maintain a properly running system.

USE WITHIN RATED CAPACITY

- For proper system performance, be sure to use system within rated capacity.
- Refer to Rated Capacity Chart for more information.

USING THE TOILET

- Educate users to use minimal amounts of single-ply or biodegradable toilet paper.
- **Waterless Self-Contained models:**
  - Open seat and bowl trap with handle to use.
- **Waterless Remote models:**
  - Open seat to use.
- **Low Water Remote and FlushSmart VF models:**
  - Use toilet and flush using foot flush or push-button electronic flush (FlushSmart VF 700 Series model only). The bowl will refill with water automatically.
  - You can push up on the foot pedal or use the “add water” function on the switch (FlushSmart VF 700 Series model only) to add more water to the bowl. However, always try to use minimal water when possible for the best composting performance and to minimize drainage.
  - In FlushSmart VF models, the vacuum generator requires approximately 30-60 seconds to recharge between flushes.
- **Add ¼ Cup of Daily Mix (or similar additive)**
  - When the system is in use, add ¼ cup of Daily Mix* (or similar additive) **per person per day** to your Envirolet®/SG Composting Unit.
  - Daily Mix keeps waste in the system from becoming too hard, absorbs water and helps visually cover any exposed waste in the system.
  - Most importantly, it also adds natural microbes that help convert the waste to compost.
  - **Waterless Self-Contained and Waterless Remote models:**
    - Add Daily Mix through toilet seat or Service Panel (Waterless Remote only).
  - **Low Water Remote and FlushSmart VF models:**
    - Be sure to add through the Service Panel on the Composting Unit and not through the toilet to keep material dry.
- Some users keep their Daily Mix beside the toilet or composting unit for easy access and add a small amount of Mix after each use (easier with Waterless models).
- Refer to Daily Additive Chart for quick reference.

Daily Additive Chart

Additive*	Number of User	Amount/User (Cups)	Total Amount (Cups)

	Per Day	Per Day	Per Day
Daily Mix	1	¼	¼
Daily Mix	2	¼	½
Daily Mix	3	¼	¾
Daily Mix	4	¼	1
Daily Mix	5	¼	1 ¼
Daily Mix	6	¼	1 ½
Daily Mix	7	¼	1 ¾
Daily Mix	8	¼	2
Daily Mix	9	¼	2 ¼
Daily Mix	10	¼	2 ½

***Note about Daily Mix Alternatives**

- Our Daily Mix is designed specifically for your system. However, other similar additives including dark soil, peat moss, coffee grounds, cocoa shells, coconut husks, wood shavings (not cedar) and sawdust can be added instead of or in addition to Daily Mix if it is not readily available locally (e.g., remote or some international locations). **HOWEVER, OUR DAILY MIX IS STILL THE BEST ADDITIVE TO USE FOR BEST PERFORMANCE.**
- Be sure to use small pieces not larger than 0.75”/2cm wide.

Using toilet paper

1. Educate users to use minimal amounts of toilet paper.
2. Regular single-ply white, toilet paper can be used with your Envirolet®/SG and will break down during the composting process.
3. If toilet paper appears dry (rare in a low flush system) or “bunches up,” then just spray the toilet paper with water to help break it up.
4. Biodegradable rapid-dissolving toilet paper will offer even better results in the system.
5. Biodegradable toilet paper is available from Sancor Industries Ltd. or most retailers.

5. Weekly Operation

There are a few important things to add to your system periodically (every weeks).

Add Extra Daily Mix on a Weekly Basis

1. **Every week add 4-6 cups of Daily Mix to the System.**
2. **Spread evenly across entire contents of Composting Unit.**

Waterless Self-Contained and Waterless Remote models:
Add Daily Mix through toilet seat or Service Panel (Waterless Remote only).

Low Water Remote and FlushSmart VF models:
Be sure to add Daily Mix through the Service Panel on the Composting Unit and not through the toilet for best results.

Note on Daily Mix Alternatives
Our Daily Mix is designed specifically for your system. However, other similar additives including dark soil, peat moss, coffee grounds, cocoa shells, coconut husks, wood shavings (not cedar) and sawdust can be added instead of or in addition to Daily Mix if it is not readily available locally (e.g., remote or some international locations). **Be sure to use small pieces not larger than 0.75”/2cm wide.**

Add Compost Accelerator

- **Every week, add 1 tablespoon of Compost Accelerator with a warm glass of water to the Composting Unit.**

Compost Accelerator will accelerate the composting process and is an important maintenance requirement.

Waterless Self-Contained and Waterless Remote models:
Add Compost Accelerator through toilet seat or Service Panel (Waterless Remote only).

Low Water Remote and FlushSmart VF models:
Be sure to add Compost Accelerator through the Service Panel on the Composting Unit

	and not through the toilet for best results.
Use Aerator Bar	• **Pull the Aerator Bar in and out a few times every week.** You can use the Aerator Bar (details below) more often, but please try and use at least every week. Learn more in the Aerator & Rake Bar Operation section.

TIP: WET OR DRY

- If compost appears too wet (or "soupy") then add and mix more dry additives until compost is dry.
- If compost appears too dry (or "clay-like") then spray small amounts of water evenly over compost to moisten.
- Refer to Troubleshooting section for more tips.

6. Mid-Season

Mid-Season Preventative Care

It is recommended to try and do a few preventative maintenance steps mid-season to prevent any possible issues. These steps should not take more than a few minutes each.

- Check all air and liquid seals
- Visually inspect that all openings in system are completely sealed for liquid and air.
- Make sure bottom panel is properly attached and that all areas that silicone-sealed have a proper seal.

7. Pre-Winter

Prepare for Winter Use

If you plan your system in the winter then proper winterizing precautions must be followed well before the start of the winter season. Refer to system-specific **Winter Use** section for complete details.

8. End of Season

End of Season Preventative Care

Similar to the mid-season point, it is recommended to try and do a few preventative maintenance steps at the end of the season (leaving the system for an extended period) to prevent any possible issues. These steps should not take more than a few minutes each.

- Check all air and liquid seals
- Visually inspect that all openings in system are completely sealed for liquid and air.
- Make sure bottom panel is properly attached and that all areas that silicone-sealed have a proper seal.

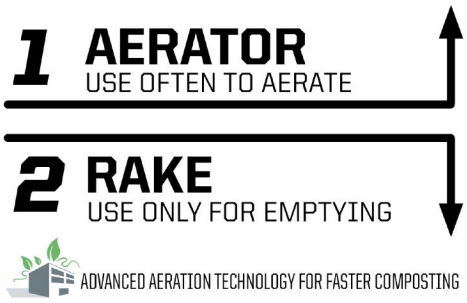
Check Electric Components

1. Listen to fans. It is not always possible to know if both are working (i.e., you may hear one fan and not know if other is functioning) but this is a good initial test.
2. Test if both fans (DC and AC models) are working with paper or bag test:
   a. Place thin piece of paper or plastic bag over toilet seat area (Waterless models) or Service Panel louvered vent (Low Water Remote and FlushSmart VF models).
   b. With proper vent fan operation the paper or bag will be drawn in.
3. Turn heater on (AC models). Wait about 5-10 minutes and feel middle of top panel. If heater is functioning it should be slightly warm to the touch.
4. The electrical box in systems older than 5 years should be inspected annually.

Electrical Problems?

	Refer to Troubleshooting section or contact us for more information if you believe any electric component is not functioning.
Check All Air & Liquid Seals	• Inspect that all openings in system are completely sealed for liquid and air. • Make sure bottom panel is properly attached and that all areas that silicone-sealed have a proper seal.

9. Aerator & Rake Bar Operation

Aerator & Rake Bars	Envirolet®/SG Composting Systems are equipped with an **Aerator Bar** (top bar) and a **Rake Bar** (bottom bar). Each has a handle located on the front of your system to operate. Each has a different function. Aerator/Rake label on front of Composting Unit: 
Aerator	Used frequently. • The Aerator is a series of blade-like and serrated cutters that will help break up & mix the compost in the system. • The Aerator helps to aerate the compost as well as assist in the distribution of the waste evenly across the system. • Simply pull the Aerator Bar “in & out” several times to operate. You can move the Aerator back and forth as many times as you wish.
Rake Bar	Used when emptying. • The Rake Bar is a series of cutters with tiny rakes attached. • The Rake Bar is used to rake composted material down into the soil-collecting tray when emptying. See **Emptying** section for more details.

10. Use the System!

Once you have set-up the system and are familiar with its operation you are ready to use the toilet!

Emptying Instructions

Information on when and how to empty your system.

IMPORTANT

Please use common sense and all normal sanitary precautions when emptying system. Treat your system as you would when cleaning any toilet. Wash hands thoroughly after emptying.

INTRODUCTION

Emptying the Envirolet®/SG Composting Toilet System is a fast and easy process. Emptying involves using the Rake Bar to empty the composted material down into the soil collection tray.

TYPICAL EMPTYING TIMES

- Emptying of your Envirolet®/SG can be as little as once per year, depending on type and frequency of use.
- However, heavy use may require emptying more often.

Typical use and emptying periods:

Type of Use	Typical Emptying Times
Vacation Type Use *Cottage, cabin, seasonal pool cabana, etc.*	1-2 times per year
Full-Time Use *Home, year-round cottage, etc.*	2-3 times per year
Commercial Use *Construction site, golf course, warehouse, etc.*	2-4 times per year

INDICATIONS OF EMPTYING REQUIRED

- The need and time to empty your system will be indirect relation to the frequency.
- An indication that you need to empty your system is when the compost in the toilet system no longer reduces in height (from removal of water by evaporation and microbe-action) or if it appears to be full, then it is time to empty.

BEFORE YOU EMPTY - EMPTYING WAIT TIMES

- Please read entire emptying instructions carefully before you begin emptying process.
- **It is recommended to rake down the compost into the soil collection tray up to two weeks prior to removal.**
- **Do not use** Envirolet®/SG Composting System for **at least 48** hours before emptying. This is to allow for liquid waste and water recently added to system to have a chance to evaporate and/or drain from system. **If possible, leave the system for at least 72 hours without use before emptying.** This is highly recommended in Non-Electric and/or Systems that use water to flush (Low Water Remote and FlushSmart VF models).
- During 48-72 hour wait period, please leave system running in **Position 2/Normal Mode** (Fans + Heater in AC Electric models or Dual Fans in 12VDC models) to speed up drying and evaporation process.
- Systems used in residential homes (all-year round) will have to empty the system about once every 3-6 months.

How to Empty

1. Check System

Before emptying, check inside Composting Unit through the toilet seat (Waterless Self-Contained models) or service panel (Waterless Remote, Low Water Remote or FlushSmart VF models) for wetness.

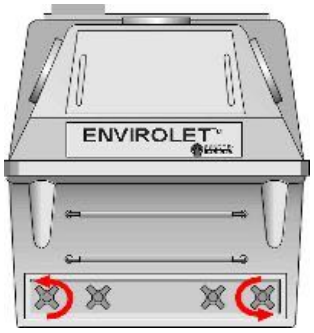
Please follow empty wait time recommendations before emptying (discussed in previous section).

If the mass inside your Envirolet®/SG Composting Unit still appears very wet, add as much Daily Mix (or peat moss) as needed to absorb the excess moisture and allow more time for evaporation prior to emptying the compost.

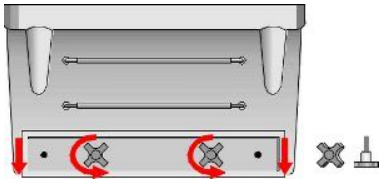
2. Remove Bottom Panel

To empty your Envirolet®/SG it is necessary to remove the Bottom Panel for access to the soil collecting tray. (You may also need to remove the Bottom Panel to clean or inspect your 2-Stage pre-sediment filter.)

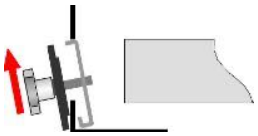
OUTER KNOBS
Turn the 2 outer knobs on the Bottom Panel counter-clockwise until they are completely removed.



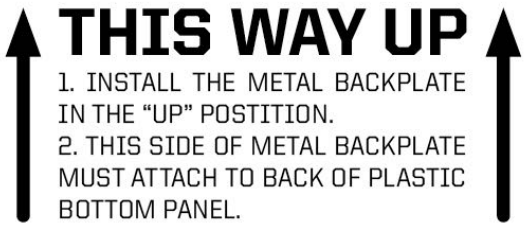
INNER KNOBS
Loosen the 2 inner knobs on the Bottom Panel counter-clockwise. It is best not to remove the inner knobs completely.



With the 2 inner knobs still attached, but loose, push with your thumbs on the inner knobs to bring the plastic Bottom Panel towards yourself until it rests flush with knobs. Lower the panel downward slightly to bring the metal Back Plate through the opening in the system. Your Bottom Panel should now be removed.

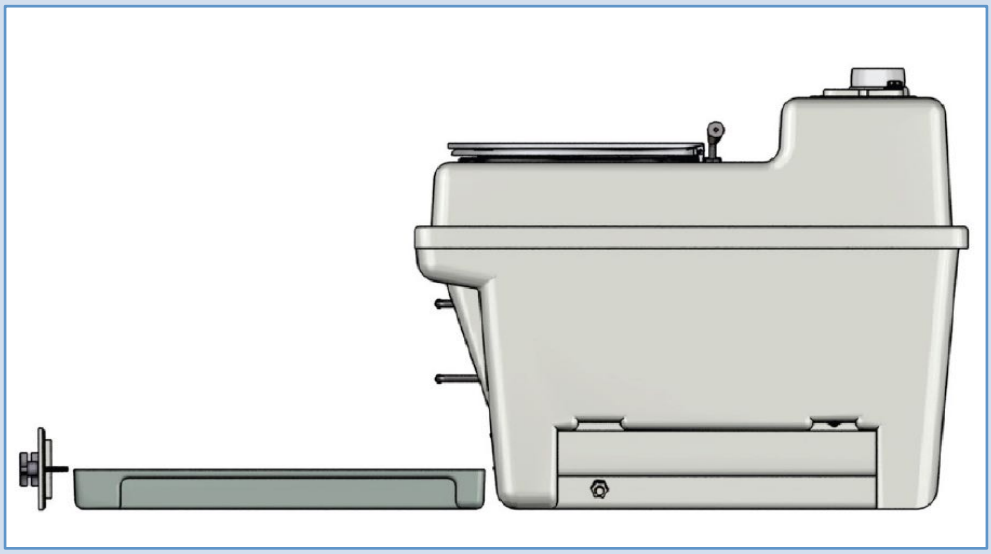


NOTE FOR LATER RE-ATTACHMENT
Take note of label on Metal Back Plate and re-install in same position when re-attaching. Back Plate "This Way Up" label:



3. Emptying Procedure

REMOVE SOIL SOLLCTING TRAY
Ensure that the soil collecting tray is empty by pulling it out. If Envirolet®/SG has been use recently, liquid may be evident. If so, do not empty at this point and, as directed, let the system "sit" to allow for evaporation.



Soil Collecting Tray Removed from Waterless Self-Contained System

RE-INSERT SOIL COLLECTING TRAY
Push empty Tray back into position so it is ready to collect your compost.

USE RAKE BAR
- Begin emptying compost by agitating the Rake Bar (bottom) on system front.
- This will release the composted soil into the empty tray.
- Check the Tray often to alert you when it is full.
- Depending on volume, you may have to empty the Tray more than once.

Rake Bar Note
The Rake Bar is a series of blade-like cutters with tiny rakes attached. It only pulls "in and out" approximately 2-3" or 5-8cm.

REMOVE TRAY AND DISPOSE OF COMPOST
Dispose of the emptied compost properly, according to local guidelines. In most cases it can be disposed of in your flower garden, buried or sprinkled in the forest. In some areas or jurisdictions you may be required to dispose of compost with your regular trash.

4. Clean Tray & Filters

Emptying is a good time to clean the tray and the 2-Stage Pre-Sediment Filters (standard on all Envirolet®/SG Non-Electric, 12VDC, Low Water Remote and FlushSmart VF models). These should be cleaned with a warm soapy water and rinsed prior to putting it back inside your system. Harsh chemicals are not recommended. Filters cloths are located in your tray (back corners) and the Filter Tube is located under your tray.

5. Check Gasket &

Before re-attaching the Bottom Panel, inspect your Bottom Panel Rubber Gasket (located on the

Re-Insert Tray

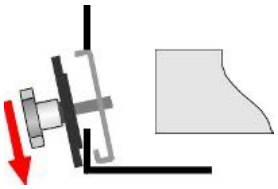
back side of the plastic bottom panel) to ensure it does not have any rips or tears that could cause a leak from your system.

Also, be sure to replace soil collecting Tray for next time. **This is very important!**

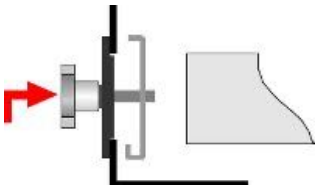
6. Re-Attach Bottom Panel

With the 2 inner Knobs still attached, but loose, push with your thumbs on the Knobs to bring the plastic Bottom Panel until it comes flush with the Knobs.

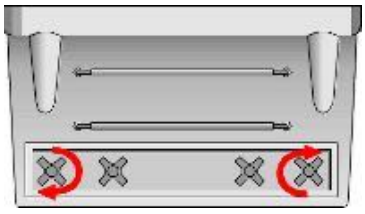
Place the metal Back Plate downward through the opening in the System. Be sure that the “L” edge of the metal Back Plate is on the top and the “C” edge is on the bottom. These edges point towards you when they are on correctly.



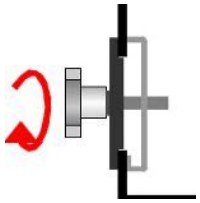
Line up the panel evenly and turn the 2 inner Knobs clockwise to tighten. Before completely tightening the inner Knobs, insert the 2 outer Knobs and turn clockwise to tighten.



Tighten all 4 Knobs. Make sure they are firmly attached. Do not over-tighten.



Check to make sure Bottom Panel is completely attached and that there are no air or liquid gaps. It should attach evenly with no obvious gaps or uneven parts.



7. Read to Go!

Your Envirolet®/SG System is now ready to use again!

Refer to Start-Up and Operation section for more information about re-starting your system.

Troubleshooting

ENVIROLET®/SG COMPOSTING TOILET SYSTEM TROUBLESHOOTING

Something seem not right with your system? Don't worry! Please use this troubleshooting guide to help remedy some possible service issues. Check this and then contact us if you require more assistance.

- Topics begin with an introduction explaining the issue and are then followed by the remedies.
- If you cannot find what you are looking for or require further clarification, please contact us right away.

Introduction

Most issues are caused by installation issues so if you are reading this before installation, please keep that in mind. Refer to the Installation Errors area for further information on common installation errors.

For most issues it is best if they are remedied right away.

Proper System Operation

Many issues can be avoided if normal operating instructions are followed. This chart is an overview of proper system operation.

System Use & Care Chart

#	Task	Start of Season	Daily	Weekly	Mid-Season	Pre-Winter Season	End of Season
1	Add Starter Mix	X					
2	Add Daily Mix		X				
3	Add Daily Mix (Weekly Use)			X			
4	Add Compost Accelerator	X		X	X	X	X
5	Use Aerator Bar	X		X			X
6	Clean drain line and filters				X		X
7	Check electric components						X
8	Empty System	X					
9	Check all air and liquid seals				X		X
10	Winterize system					X	

Refer to System Start-Up and Operation sections for complete details.

Issues & Remedies

Outside Odour

Noticeable odour outside (near or around vent or roof).

Poor evaporation

Poor evaporation could be occurring due to a liquid build-up issue. Refer to liquid build-up section.

Overhanging trees

Overhanging trees may affect vent exit air flow. Trim or cut away overhanging trees.

High peak roof causing poor evaporation

A high roof peak may be inhibiting air flow (wind) to the top of the vent. Raise vent higher.

Low Vent Stack

The top of your vent stack may be too low (i.e., close proximity to sitting area). Raise vent higher.

Suggested Remedy

You may also want to try, in combination with above remedies, a Sancor™ Air Solution cartridge.

Inside Odour

Noticeable odour inside location of Compost Unit (not inside bathroom where toilet is).

Vent fan not functioning

If the vent fan fails, the blower fan may exhaust air/odour out of unit. Replace vent fan. Refer to liquid build-up section.

Improper venting

An angled vent can create liquid build-up by not allowing for proper evaporation. A straight vent is best. **Never install a 90° bend in the vent.**

Improper sealing of vent connection, Top Panel, Bottom Panel, drain exits, etc.

Check and re-seal vent connections, Top Panel, Bottom Panel, drain exits. Even a small “pin-hole” sized opening or leak can cause odour.

Another exhaust fan “competing” with system

Another exhaust fan or vent may be drawing air away from toilet area such as a wood-stove, open window, ceiling fan, heater etc. Keep composting unit room door and window shut.

8” Flex Drain Not Cut to Size

Be sure that the 8” flex drain (the connection drain from Waterless Toilet to Composting Unit) on Envirolet®/SG Waterless Remote models does not go from the top of the composting unit entry point too far down into the tank. It should only extend down about 3-4” maximum from the entry point. If it is too long it may cause an air-flow issue when waste/compost is above it.

Liquid Build-Up

An unusual accumulation of liquid in the system. Keep in mind that Low Water Remote and FlushSmart VF

Electrical problem

Inspect electric WID Box for electric issues or failure. Failed fans or heater can cause liquid to build-up. Contact customer service, local dealer or correct problem.

systems use water to flush so there will almost always be some liquid in the system.

Improper venting
An angled vent can create liquid build-up by not allowing for proper evaporation. A straight vent is best. **Never install a 90° bend in the vent.**

Vent obstruction
If anything is in the vent (cob webs, twigs, animals, screens, etc.) it can block it and reduce evaporation. Check and clear vent.

Do not place any obstructions in or over the vent, including "screens" (e.g., mesh screen) for any reason including in attempt to control insects as this will impede the evaporation and may cause your fan to fail. (Insects will not travel down the vent line to enter system. Follow insect troubleshooting info below.

Wind turbine ventilator not turning
Check turbine to see if anything is preventing it from spinning. Check that the turbine is getting air (wind) to it and that it is not in a "dead air spot because of the roof or overhanging trees.

Improper operation
Are too many people using the system? Stay within rated capacity.

Drain line blockage or drain is not gravity fed
Check that drain line is not blocked or pinched. Check that air lock vent on Quick Connect "T" is facing up and is not blocked. Check inside system to determine if filter is blocked. See Filter and Drain Blockage. Ensure drain is gravity fed to drain site its entire path.

Heavy use (no drain line used)
All VF systems must have drain installed and in use.

Cold installation room location or floor temperature
Is the floor really cold? Try warming room and/or raising system off ground to allow for less cold floor heat loss.

Too much additional liquid added.
Do not add any extra liquid (sink, shower, etc.) to system.

Composting unit not insulated (if used during cold weather or winter)
It is not recommended to use VF system in winter unless location of Compost Unit plus all drains, vent, etc. are heated or very well insulated.

Another exhaust fan competing with system
Another exhaust fan or vent may be drawing air away from toilet area such as a wood-stove, open window, ceiling fan, heater etc. Keep Compost Unit room door and window shut.

Wait Time Not Observed Before Emptying
Remember that it is recommended to wait at least 48 hours after last use before emptying your system to allow any "new" liquid to be evaporated and/or drained. Refer to Emptying Instructions for more.

Fan Failure

Envirolet®/SG AC and DC models have **2 Fans** that are essential for proper aeration, evaporation and performance. If one fails, it should be replaced immediately. Fans are mechanical moving parts so they can fail.

Signs that a Fan has failed include inside odour, low evaporation, and a "whizzing" sound or no sound from Fan. The Fans are located in the electric WID (Works-in-a-Drawer) Box below. Contact an authorized technician and completely shut off power before opening Top Panel. For your safety, do not make any modifications or changes without first contacting an authorized technician.

Vent Fan (left side) failure

If you have inside (where Compost Unit is housed) odour, this is an indication that the Vent Fan has failed. Contact dealer or contact customer service help line for replacement instruction. See Fan Replacement.

Blower Fan (right side) failure

Low evaporation rate is a sign that the Blower Fan has failed. Contact dealer or contact customer service help line for replacement instruction. See Fan Replacement.

Bottom Panel Leak

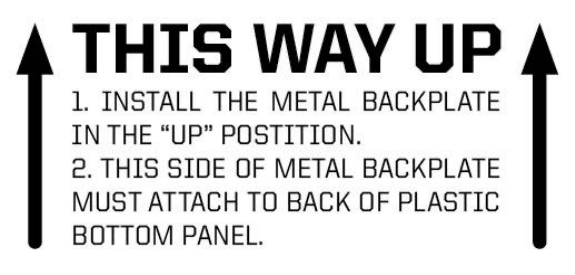
The Bottom Panel on all Envirolet®/SG Systems is sealed. Any leakage from it is not normal. If you do have a leak, do not open the Bottom Panel until you figure out the cause of the leak to avoid liquid spill.

Knobs on Bottom Panel are not fastened on tightly enough.

Tighten Knobs on Bottom Panel.

Bottom panel is on upside down

To check if the Bottom Panel is on upside down: there is a metal plate attached to the backside of the Bottom Panel. Each end of the metal plate (top and bottom) has a "curve." One is shaped like an "L" and one is shaped like a "C." Make sure that the "L" shaped edge is on top. Also, use the arrows on the sticker found on the back of the metal plate:



Bottom panel gasket needs to be replaced

If the Bottom Panel Rubber Gasket is ripped or has a tear it should be replaced.

Rubber washers need to be replaced

Replace rubber washers if they are ripped or damaged.

Heavy use with no overflow drain connected or a clogged drain line

Follow rated capacity (user) guidelines. Make sure drain line is not clogged or blocked. Refer to Liquid Build-Up section. Note, to determine if your drain line is being blocked by debris, you will need to open the Bottom Panel. Please do not do this unless it is a last resort for troubleshooting if you have a leaking panel.

Excess liquid being flushed

In Envirolet®/SG Low Water and FlushSmart VF models, try and flush with the most minimal amount of water as possible.

Aerator or Rake Bar Issues

Aerator Bar is difficult to move. This can be caused if the material in the system becomes too dry. Some of the remedies can also be used for Rake Bar issues.

Low system use

Material may be dry because of low use. Move Aerator Bar (top) back and forth to help break apart the material. Add water (or use toilet) to add moisture.

Infrequent use of Aerator Bar

Add water (or use toilet) to add moisture. Use Aerator Bar more often.

Infrequent addition of Daily Mix or Compost Accelerator (microbes)

Material may be "clumping." Use a garden tool or poking device to break up material from Service Panel. Refer to the Daily Additive Chart:

Daily Additive Chart

Additive*	Number of User Per Day	Amount/User (Cups) Per Day	Total Amount (Cups) Per Day
Daily Mix	1	¼	¼
Daily Mix	2	¼	½
Daily Mix	3	¼	¾
Daily Mix	4	¼	1
Daily Mix	5	¼	1 ¼
Daily Mix	6	¼	1 ½
Daily Mix	7	¼	1 ¾
Daily Mix	8	¼	2
Daily Mix	9	¼	2 ¼
Daily Mix	10	¼	2 ½

***Note about Daily Mix Alternatives**

- Other similar additives including dark soil, peat moss, coffee grounds, cocoa shells, coconut husks, wood shavings (not cedar) and sawdust can be added instead of or in addition to Daily Mix if it is not readily available locally.
- Be sure to use small pieces not larger than 0.75"/2cm wide.

Low Water Toilet Issues

Water not staying in bowl

If water is not staying in the bowl of your low water toilet, you probably need to replace the seal.

Water valve is broken

Replace the water valve.

FlushSmart VF Specific Issues

These refer specifically to FlushSmart VF vacuum-flush systems.

Vacuum Generator Runs Continuously runs - Red light stays on

Indicates vacuum leak. Check and tighten all 1.5" flex drain connections Check all plastic fitting connections are sealed properly with solvent cement. Check seal in toilet bowl. Wipe with liquid soap to remove any deposit buildup.

Too much water in toilet bowl - should be 0.2L/6oz.

Check Water Regulator Supply installed. **Be sure to install supplied water regulator.**

Vacuum Generator won't run. Light on wall switch does not illuminate.

Check Power Supply is on. Check Vacuum Generator Switch is on.

Water drains from toilet bowl
Bowl trap not closed properly. Bowl seal requires cleaning or replacement.

Water keeps filling toilet bowl
Sand or sediment may be in water supply. Sediment filter required on water supply. Solenoid valve on toilet must be cleaned.

Water drains from toilet bowl
Bowl trap not closed properly. Bowl seal requires cleaning or replacement.

Toilet will not flush. Vacuum Generator not starting.
1.5" flex line blockage. Use wire snake to unblock or replace flex line.

Composting Issues
Composting is a natural process. Your Envirolet®/SG works to create an ideal environment for composting to occur.

If the composting process is not happening properly, there are usually some easy remedies.

Indications of improper composting are:

- wet or mud-like mass
- clay-like mass
- insects present in mass
- strong odour from mass
- clumping.

Composting needs air, heat and moisture. Treat your system like a garden!

Also, remember to give it some time to compost!

Compost too dry
Spray water in system.

Not enough additive or bulking material being added
Add more peat moss, Compost Accelerator or other suggested additives.

Fan failure
Fan failure will reduce aeration. See Fan Failure section.

Chemicals or other harmful substance introduced to system
Stop adding harmful material immediately. Complete system emptying and re-start may be required in extreme cases.

Lack of heat
Heat is needed for composting and evaporation. Check Heater (and thermostats), insulate or heat room and floor where Compost Unit is housed. Keep ambient room/enclosure temperature above 12°C (55°F). Warmer is better.

Lack of evaporation
Check electric components (fans, heater, etc.), venting system and ensure Service Panel airflow is well-secured to unit and is not blocked. Make sure room/shed where Compost Unit is properly vented.

Over-use
Use within rated system capacity.

Clumping
Use poker or garden tool to break-up material. Add more additives.

Insects
As composting is a natural process involving natural tiny bacteria, heat and moisture it only makes sense that insects arrive too, right?

Well, yes and no! If insects appear and are bothering you or disturbing, it is easy to get rid of them! Luckily, if they do appear it is rare for them to be anywhere near the inside bathroom toilet.

How they get in
Insects normally enter the system through accidental entry into your home or cottage (through a window, un-screened area, or door). They can be present in organic products (peat moss) or kitchen waste added to your system. One insect entering your toilet can multiply rapidly. Insects or eggs can be present in peat moss.

Add Diatomaceous Earth or any other organic pesticide to the system, which can be purchased from most pool supply stores and garden stores. It is a yellowish-white powder. Too add, sprinkle a generous amount of Diatomaceous Earth on top of the solid waste in your composting unit for 3-5 days in a row. The insects should disappear by day 2 or 3. House and Garden Raid or any other indoor/outdoor spray pesticide may be more effective in killing fly insects. Spraying a small amount of insecticide will not harm your system, but do not add too much as it may disrupt the composting process.

Installation Issues & Errors

Installation “errors” can lead to any of the above troubleshooting issues. It is essential that your system be installed correctly for it to perform properly. In this section we will list some possible or common installation errors (or shortcuts) that can lead to later difficulties.

Important:
Please do not assume that you can “shortcut” proper installation or that a different way is equal to the way outlined in our instructions.

Venting

- **Do not use 90° bends in vent.** This is mentioned numerous times throughout this manual.
  - This will cause significant evaporation issues.
- Do not use your own vent pipe instead of the vent pipe supplied with system.
  - This pipe may be smaller than the normal vent pipe used with your system and this can cause evaporation issues.
  - This pipe may be metal, which can corrode.
  - Fittings may not attach securely.
- Do not place a screen or mesh cover over the vent opening.
  - This will cause significant evaporation issues.
  - Do not use alternative vent “caps” other than the supplied Wind Turbine Ventilator.
- Insulate all venting, in Waterless Self-Contained Systems, which are outside, in an attic or cold air space.

Draining

- Do not ignore the drain! It must be connected in any system that it is included with. **The drain must be gravity fed the entire path from toilet to drain site.**

Notes

Add system maintenance notes below.

Testimonials

Send us a testimonial with installation photos for us to post on Envirolet Buzz and we'll send you some free accessories or a gift certificate for one of our websites. Email testimonial and installation photos to buzz@enviroletbuzz.com. Check Envirolet Buzz at enviroletbuzz.com for the latest offer and to look at hundreds of testimonials already posted.

Fine Print

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