Sun-Mar

Composting Toilets

- No Septic
- No Plumbing

Sun-Mar Composting Toilets

Protecting the environment for over 25 years

At Sun-Mar, we are proud of our history and the role our products play in protecting the environment.

- Sun-Mar toilets are the safest and most environmentally friendly method of waste treatment
- Sun-Mar composting toilets evaporate liquids and compost the solids, so on most models there is absolutely no output and no contamination of ground water
- Sun-Mar composting toilets have saved over 3.3 billion gallons of water, and counting!

WHAT IS COMPOSTING?

- Composting converts organic matter back to its essential minerals
- Aerobic microbes do this in the presence of moisture and air, by converting carbon to carbon dioxide gas, and hydrogen to water vapor
- As a result, some 95% of the starting material is evaporated
- The resulting compost is recycled back to nature

Sun-Mar units have no equal!

Sun-Mar is a world leader in composting toilet technology.

- Our unique, patented Bio-drum™ design means fast, odor-free composting
- Sun-Mar toilets are the only ones certified by NSF to NSF/ANSI Standard #41 for residential and cottage use (most regulators require NSF certification)
- Sun-Mar toilets are designed so that air is constantly being drawn in and up the vent stack providing odor-free operation
- Sun-Mar toilets are sold by a global network of thousands of dealers
- Sun-Mar's unique 3 chamber technology means easy operation and maintenance

Why use a Sun-Mar composting toilet?

General Benefits

- No Plumbing
- No Water
- Odor-Free
- Inexpensive Solution

Environmental Benefits

- No Pollution
- Saves Water
- Recycles Nutrients
- Little or No Liquid Output

Global Composting Experts

Sun-Mar Toilets are easily installed anywhere!

They are an ideal solution:

- Where it is not possible or cost-effective to install a conventional toilet
- As an environmentally friendly alternative

Sun-Mar toilets are used in:

- Homes, cottages, garages, warehouses, barns, pool cabanas, cabins, mines, eco resorts, RV's, boats and many other locations

WARRANTY

All units carry a full 5 year replacement warranty on the fibreglass tank and a comprehensive 3 year replacement warranty on all other parts

There is only one performance standard for composting toilets in North America. This is National Sanitation Foundation (*) NSF/ANSI Standard #41, 2005.

Sun-Mar is certified by NSF under this stringent standard. Testing is conducted for 6 months at a NSF recognized independent testing laboratory under a strict test protocol. To be certified the unit must operate odor-free at maximum capacity (including overload conditions) and produce clean, safe compost.

As additional verification, NSF obtains and tests additional compost samples from randomly selected units in regular field operation, and conducts interviews with the users of these units. For verification check NSF website.

Electrical features are
CSA APPROVED LR 55925-2

Certified to comply with applicable European Product Safety Standards and satisfies the provision for CE marking

AUST STANDARD AS/NZS 1546.2
Lic #20630 SAI GLOBAL

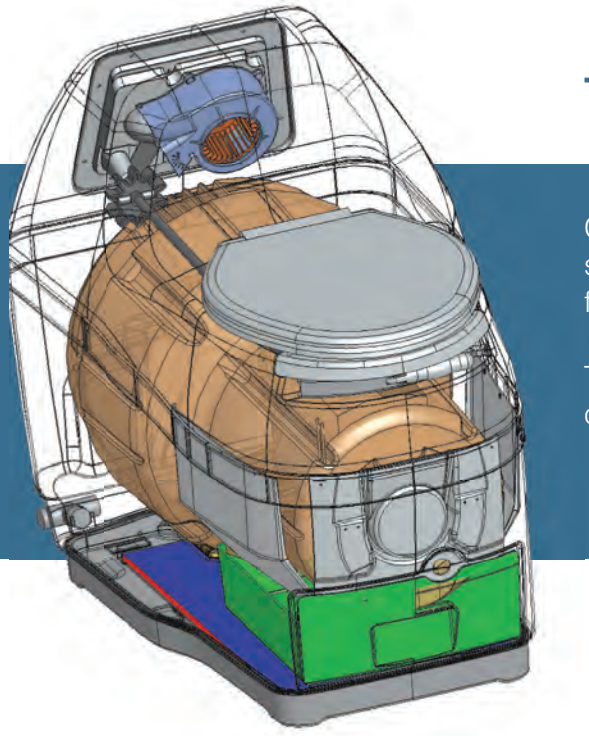
United States Coast Guard Certified

(*) NSF International is a not for profit, non-governmental organization. It is the world leader in standards development, product certification, education, and risk management for public health and safety and for 65 years, has been committed to public health, safety, and protection of the environment

Operating a Sun-Mar

Operating a Sun-Mar toilet is simple. Everything you need to get started is included with the unit.

To operate the toilet simply add Sun-Mar's bulking material and rotate the patented Bio-drum™
Removing compost is quick and easy and is usually only done a few times per year with regular use.



Three Chamber Technology

Composting toilets compost waste, evaporate liquid, and provide safe and finished compost. Not surprisingly, the conditions needed for each task are different.

This is why Sun-Mar toilets incorporate a three chamber system that optimizes ideal conditions in each chamber.

SUN-MAR toilets compost all regular toilet paper

1. The Sun-Mar Bio-drum™ unique advantages

Sun-Mar's Bio-drum™ has obvious advantages that offer the ideal environment for composting.

- Tumbling the Bio-drum™ optimizes mixing and aeration and allows for moisture and oxygen to be evenly distributed throughout the compost
- The Bio-drum™ ensures there is no excess moisture by removing it automatically and sending it into the evaporating chamber
- The Bio-drum™ is separated from direct heat in the evaporation chamber so the compost is kept moist thereby accelerating decomposition
- The Bio-drum™ offers unmatched simplicity of operation. To mix and aerate merely turn the Bio-drum™ handle periodically
- By providing perfect mixing, oxygenation and moisture control, the Bio-drum™ offers an ideal environment for aerobic bacteria to flourish and quickly break down organic material

2. The Advantages of the Sun-Mar automatic evaporating system

The Sun-Mar evaporation chamber has a large evaporating surface with thermostatically controlled heat, lots of air movement and offers the ideal environment for evaporation.

- The floor of the unit below the drawer incorporates the evaporating chamber
- Electric units have a thermostatically controlled heater in a sealed compartment below the evaporating chamber
- On electric units a fan draws air into the unit to ensure odor-free operation, and to optimize evaporation
- The fan can be adjusted to optimize the mix between re-circulated and vented air for every installation
- Non-electric units rely on the vent stack to provide some evaporation from natural drafting
- Evaporation and air movement on non-electric units can be enhanced by installing a 12 Volt fan in the vent stack

3. The Advantages of the unique Sun-Mar finishing drawer

The Sun-Mar finishing drawer is an isolated chamber, into which finished compost drops automatically when the Bio-drum™ is rotated in reverse. Here the compost can be left to complete the composting and sanitation process, isolated from exposure to new waste.

- While in the drawer the compost is surrounded by a stream of drying air and gradually dries prior to removal
- Once complete the sanitized compost is quickly and easily removed by sliding out the finishing drawer

Which Model is right for me?

3 easy steps to determine the right model for you:

1. Self-Contained or Central units?

Self-contained Units

These units are installed directly in the bathroom.

Main Features

- Quick and easy to install
- Waterless – no plumbing required
- Electrical units can evaporate all liquids under normal conditions
- Easy to clean having a durable shiny contoured finish

Central Units

These units have a conventional looking toilet in the bathroom and a separate composting unit.

They are available in two styles - low water flush and A/F waterless.

Low water style systems

- Feature a conventional looking toilet in the bathroom
- Can be connected to multiple bathrooms

Waterless style systems (A/F kit required)

- Feature a conventional looking toilet in the bathroom
- No plumbing necessary

2. Electric or Non-Electric?

Electric Toilets

Select these if you have a standard electricity supply. These units feature high quality fans and thermostatically controlled heaters.

Non-Electric Toilets

Select these if you have no power or are using alternative energy. These toilets feature a higher capacity ventilation stack.

Dual Voltage

Select the AC/DC Kit if you require the option of operating in a standard electric mode (115 Volt) or with only a 12 Volt 1.4 fan or with no power at all.

3. Capacity and Color

Capacity

Select a toilet based on the right capacity for your needs. Although advertised capacities can be doubled for short periods, Sun-Mar recommends selecting a toilet with the maximum number of users in mind.

Color

Choice of white or bone to match your bathroom fixtures

White

Bone

Model Overview - Self-Contained Units

Sun-Mar's self-contained toilets are quickly and easily installed anywhere a toilet is desired. All toilets are manufactured to the highest standards using advanced materials. The durable smooth contoured finish makes these toilets attractive and easy to clean. All units feature Sun-Mar's patented Bio-drum™ and unique three chamber technology that provides ideal composting conditions. All self-contained toilets are waterless, require no plumbing and provide odor-free operation.

Self-Contained Units	Model	Description	COMPOSTING CAPACITY Residential/ Continuous	COMPOSTING CAPACITY Weekend/ Vacation	Voltage	Color
	Excel NSF	High Capacity Electric Unit	3 Adults or Family of 5	6 Adults or Family of 8	115V or 230V or AC/DC option*	White or Bone
	• Features a detachable footrest					
	Excel NE NSF	High Capacity Non-Electric Unit	2 Adults or Family of 3	5 Adults or Family of 7	-	White or Bone
	• Features a detachable footrest					
	Compact NSF	Medium Capacity Electric Unit	1 Adult	3 Adults or Family of 4	115V or 230V	White or Bone
	SpaceSaver NSF	Medium Capacity Electric Unit	1 Adult	3 Adults or Family of 4	115V or 230V	White or Bone
	• Features a detachable footrest					

*Kit required

Mobile NSF

Medium Capacity Electric Unit

1 Adult

3 Adults or Family of 4

115V, 230V or 12V

Bone

Sun-Mar Mobile is designed for use on boats and RVs. It eliminates the need for pump outs. The Mobile is engineered to accommodate motion with mounting brackets, a sealed finishing drawer and fold up footrest.

The Mobile includes an air filtration kit for odor-free deck level venting on boats.

Model Overview - CENTREX Units

Sun-Mar central systems are ideal for those who want to have a conventional looking toilet in the bathroom with the central unit separate. Sun-Mar has three series of central units; the regular capacity CENTREX 1000, the high capacity CENTREX 2000, and the ultra high capacity CENTREX 3000.

For typical seasonal use, compost is extracted annually. CENTREX 3000 units also incorporate Sun-Mar's unique Autoflow® technology that causes compost to move automatically through the Bio-drum™ and drop into a separate collection chamber.

Central units may be operated in low water or A/F waterless mode.

Low water style systems
- Feature a conventional looking porcelain toilet in the bathroom
- Can be connected to multiple toilets up to 15 feet from the CENTREX unit
- For use with model 510 and/or 511 ultra low flush toilets (ordered separately)

Waterless style for CENTREX 2000 and CENTREX 3000 systems (A/F waterless kit required)
- Feature a conventional looking toilet in the bathroom positioned above the CENTREX unit
- No plumbing necessary
- For use with Sun-Mar dry toilet (ordered separately)

For optimal operation of all CENTREX units use Compost Sure Blue for low water style systems or Compost Sure Green for waterless systems.

Central Units	Model	Description	COMPOSTING CAPACITY		Voltage	Water
			Residential/ Continuous	Weekend/ Vacation		
	CENTREX 1000 Series NSF	Regular Capacity Electric Unit	-	5 Adults or Family of 7	115V or 230V or Non-Electric or AC/DC option*	Ultra Low Water Flush
	• Capacity reduced by 1 person for non electric model					
	CENTREX 2000 Series NSF	High Capacity Electric Unit	4 Adults or Family of 6	7 Adults or Family of 9	115V or 230V or Non-Electric or AC/DC option*	Ultra Low Water Flush, or A/F Waterless Option*†
	• Capacity reduced by 1 person for non electric model					
	CENTREX 3000 Series NSF	High Capacity Electric Unit	6 Adults or Family of 8	9 Adults or Family of 11	115V or 230V or Non-Electric or AC/DC option*	Ultra Low Water Flush, or A/F Waterless Option*†
	• Capacity reduced by 1 person for non electric model • Incorporates Autoflow® technology (automatic discharge of compost to a separate collection chamber)					

†Contact Sun-Mar for A/F capacity ratings
*Kit required

CENTREX System Toilet Options

Ultra Low Flush Toilets (Model 510)

Using roughly one pint of water per flush, these porcelain ultra low flush toilets provide all the aesthetics of a conventional toilet while minimizing water usage. Available in white or bone colors and having a regular sized seat, several toilets can be installed to a single CENTREX unit. Where additional height is required for the toilet to gravity feed to the composting unit, a low profile Model 511 is offered.

Available in:

White Bone

CENTREX A/F Waterless Toilet

The A/F waterless toilet offers features similar to a conventional toilet. Available in white or bone colors and regular sized seat, this toilet is used with CENTREX 2000 or CENTREX 3000 units configured for waterless use. CENTREX A/F toilets are connected directly above a CENTREX unit.

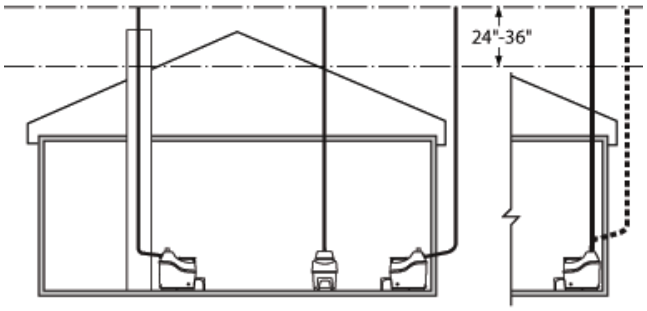
Available in:

White Bone

Sun-Mar units are designed for easy installation

All Units Include:

- Vent kit
- Starting accessories including Compost Sure bulking agent
- Compost Quick enzyme for cleaning and accelerating composting and Microbe Mix bacteria
- Owner operating and care manual
- Warranty card



Installing the vent stack

All composting units require a vent stack. For details on possible vent configurations, see sample configurations illustrated at left.

Sun-Mar recommends an optional 12V fan for non electric units used in a residential setting or installed with one or more 45° angles or is in areas subject to downdraft.

Electrical installation

Electric units are fitted with a standard 115 Volt plug (230V for international). Power is supplied to the fan and heating element.

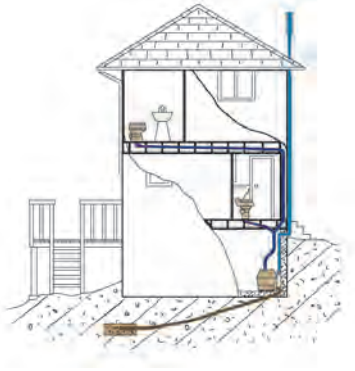
Evaporation

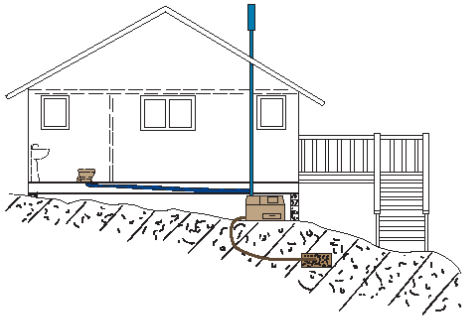
- Sun-Mar units have been engineered to automatically evaporate liquids without drying out the compost
- Sun-Mar's advanced evaporation process uses little or no power
- Electric units incorporate a fan featuring adjustable re-circulation and stainless steel shaft for extended life

Handling excess liquid

Self-contained electric units (Except Mobile) and CENTREX electric waterless units will evaporate all liquids under normal operation. As a precautionary measure Sun-Mar recommends that the drains on all toilets be connected.

Collect and/or treat excess liquid in an approved facility such as a recycling bed, old septic system, holding tank or drain pit.
All installations should conform to local regulations.





For more details and recommendations on recycling beds please visit our website.

Winter Use

For extended winter use the composting unit has to be kept above 13° Celsius or 55° Fahrenheit.

Limited Winter Use

For limited use in cold temperatures you can use the unit as a holding tank as long as there is enough space in the patented Bio-drum™.

Specifications

SELF-CONTAINED UNITS	Excel	Excel NE	Compact	Space Saver	Mobile
Average Power use in watts (heater on 1/2 time)	150	N/A	125	110	80
UNIT DIMENSIONS (INCHES)					
Height	33¼	31½	28½	30	30
Depth	33	31½	33	23	23
Width	22½	22½	21½	19½	19½
VENT & DRAINS					
Vent Pipe (2" cent. vac. tubing; 3" & 4" sewer)	2"	4"	2"	2"	3"
Drains (required or optional hook-up)	1" O.D. opt.	1" req.	¾" O.D. opt.	1" req.	1" req.
WEIGHT (LBS)					
Product Weight-Shipping Weight	60-85	47-81	48-72	43-68	44-72
SHIPPING CARTON DIMENSIONS (INCHES)					
Width	28	28	28	23	23
Length	36	36	36	30	30
Height	36	36	32	38	38
ROUGH-IN MEASUREMENTS (INCHES)					
Depth required to remove drawer (Unit plus drawer)	46	46	45	38	38

CENTRAL UNITS	1000	1000 NE	2000	2000 NE	3000	3000 NE
Average Power use in watts (heater on ½ time)	150	N/A	200	N/A	200	N/A
UNIT DIMENSIONS (INCHES)						
Height	28½	27½	28	26½	30¼	29¼
Depth	32½	32½	27	26½	27½	27½
Unit Width, and Width required to turn handle	22½ x 24½	22½ x 24½	45½ x 49	45½ x 49	71	71
VENT & DRAINS						
Vent Pipe (2" cent. vac. tubing; 3" & 4" sewer)	2"	4"	2"	4"	2"	4"
1" Drains (required or optional hook-up)	Req.	Req.	Req.	Req.	Req.	Req.
WEIGHT (LBS)						
Product Weight - Shipping Weight	57-80	42-78	74-112	63-109	110-144	95-135
SHIPPING CARTON DIMENSIONS (INCHES)						
Width	28	27	29	29	30	30
Length	36	36	46	46	62	62
Height	32	36	35	35	34	34
ROUGH-IN MEASUREMENTS (INCHES)						
Depth required to remove drawer (unit plus drawer)	46¼	46¼	45	45	45½	45½

Option Kits

A/F Waterless Kit

Kit required for use with Sun-Mar waterless toilets and CENTREX 2000 and CENTREX 3000 systems. Includes a 12V fan and hardware kit.

AC/DC Kit

This kit allows an electric unit to be converted to operate in a 12 volt or non-electric mode. When converted the unit will have both a 2 inch and 4 inch vent stack. This kit can only be used with the EXCEL, CENTREX 1000, CENTREX 2000 and CENTREX 3000.

Sun-Mar Composting Accessories

Sun-Mar accessories optimize toilet performance

Compost Sure (Green)

The ideal bulking agent for your Sun-Mar waterless toilet. Compost Sure Green is specially formulated to keep compost enriched with organic carbon, moist and maintain porosity ensuring maximum aeration.

Compost Sure (Blue)

For use with all Sun-Mar low water CENTREX systems. Compost Sure Blue's mix enriches compost with organic carbon and also provides drainage of excess liquid ensuring compost remains aerobic and odor-free.

Microbe Mix

100% natural product combining a blend of microbes and enzymes designed to start and accelerate composting in all Sun-Mar toilets.

Compost Quick

Cleans and accelerates the composting action of your Sun-Mar composting toilet. Compost Quick is a specially selected natural enzyme solution that also assists aerobic decomposition of waste. Compost Quick is 100% natural and non toxic.

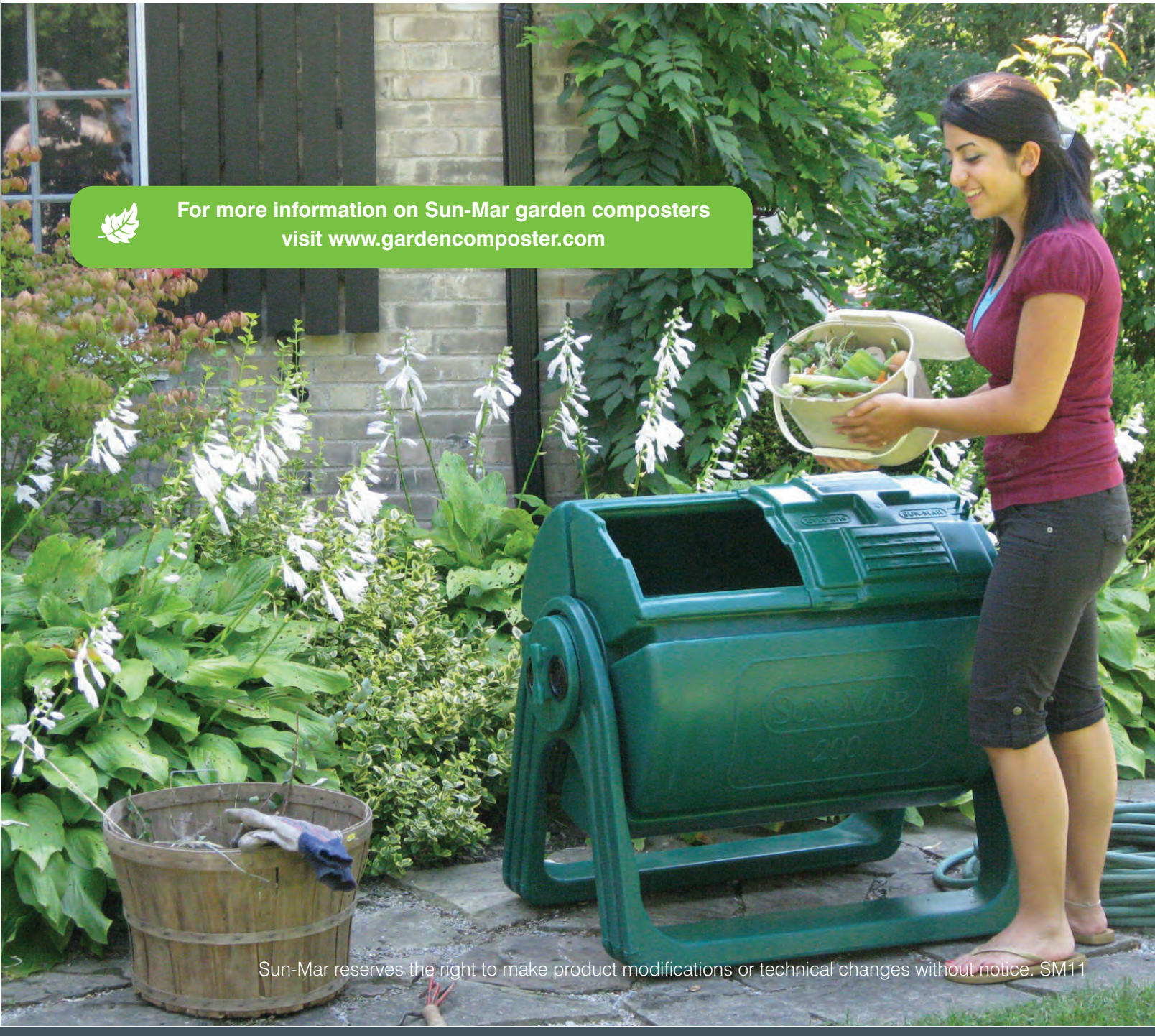
Global Composting Experts

Finally, Composting made easy!

Sun-Mar's range of garden composters incorporate a patented, double drum, Autoflow® design, allowing for continuous use; now there is no waiting for batches to finish.

Unique Autoflow® features:

- Continuous composting
- No waiting for batches to finish
- Pest Resistant
- Loads and turns easily
- Compost exits automatically



Sun-Mar reserves the right to make product modifications or technical changes without notice. SM11

Sun-Mar
Global Composting Experts

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