

# SUN-MAR CORP. -The Composting Company

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## GARDEN COMPOSTER OWNERS MANUAL



# OWNER'S MANUAL

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### Warning

**Follow assembly steps as outlined in the manual. Do not pre-assemble as black end cap plug cannot be removed once inserted.**

## Accessory Items for Composting

At SUN-MAR, we have developed a number of composting accessory items in response to requests from our customers. These accessories may help to improve composting speeds.

Name	Description	Container	Price*
<b>SUN-MAR "Compost Sure"</b>	Bulking material containing a mix of coarse peat moss, and chopped hemp stalk to provide moisture retention, porosity, and free air space within the compost.	30 litre (7.9USG) /bag	\$10.00* <i>*Price does not include freight - see chart below for region specific freight charges</i>
<b>SUN-MAR "Compost Swift"</b>	Specially selected aerobic bacteria and enzymes.	16 oz. (454 gm) bottle	\$20.00 Freight included

### Freight Charges

	Canada	Zone 1	Zone 2	Zone 3
Compost Sure	\$13.00	\$10.00	\$15.00	\$20.00

Zone 1 ME, NY, CT, MA, RI, PA, NJ, DE, VA, WV, KY, OH, IN, MI, IL, IA, MN, NC, SC, GA, AL, MS, TN, FL, LA, AR, OK, TX, KY, KS, NE, SD, NC, WY, UT, CO, NM, AZ

Zone 2 WA, OR, ID, MT, NV, CA

Zone 3 AK, HI

### Note:

Current prices should be obtained at the time of ordering. When phoning in an order, please include your credit card number.

## Trouble Shooting Your Compost

If things go wrong, or you'd just like things to go better, check out this list of possible problems.

Problem	Solution
Compost too dry (less than 40% moisture content)	Add water
Compost too wet (more than 60% moisture)	Let it dry, or add some brown bulking material.
Compost not breaking down fast enough	<ul style="list-style-type: none"> <li>- Chop waste up finer</li> <li>- Compost too cold</li> <li>- Insufficient green material</li> <li>- Do not overfill, cut back on new additions</li> </ul>
Outer drum too full	<p>Increase number of revolutions so compost moves faster through the inner drum. If this is unsuccessful, open input door and rotate drum to remove material through input door.</p>
Compost not feeding out of output port	<ul style="list-style-type: none"> <li>- Outer drum not yet full enough</li> <li>- Unblock entrance to inner drum with poker</li> <li>- Increase number of rotations</li> </ul>

## ASSEMBLY

The SUN-MAR 200 comes with very little assembly required.

To reduce the height of the shipping container, the unit is packed with the drum upside down in the cradle. Assembly requires that the drum be removed from the cradle, and then reversed. The output port door is loose inside the box and should be screwed into the output bearing.

### Step 1

Remove the drum from the cradle. Rotate the drum and reinsert into the cradle so the 4" bearing is in line with the 4" bearing support.



### Step 2

Turn the assembly on its side so the output bearing support on the cradle is on the ground, with the 4" bearing uppermost. Press the 4" bearing support into the 4" bearing. Turn the assembly 180 degrees so the 4" bearing side is on the ground and the output bearing is uppermost. Snap the output bearing into the output bearing support.



### Step 3

Press the the black end cap into the end of the 4" bearing support end of the drum. Turn drum around and screw the output port door into the output port.



### Step 4

Take the hardware bag containing 1/4" stainless steel rods and rollers. Put the steel rod in the roller. Place one side of the steel rod of this roller assembly into the roller cavities and tap lightly with a hammer then tap the other side of the steel rod into the other side of the roller cavity. Finish by tapping the wheel to firmly affix the assembly in place. Repeat on all 4 corners of the cradle.



### Step 5

Place vents over holes in sliding door and output door and push until vents are flush with exterior.



### Initial Start Up

Start by carrying out the start up procedure described below, and then continue with the "Ongoing Maintenance" routine.

Action	Why?
<b>POSITION</b> composter on a flat surface.	For ease of movement and use.
<b>ADD</b> 1-2 gallons of peat moss or composted material (if available) to the drum.	Bulking material will help to retain moisture, and also helps to mix and break up waste material.
<b>ADD</b> waste to drum as finely chopped as possible. Chop larger pieces up into 1" pieces.	The smaller the pieces, the more surface area is presented to the microbes and the faster decomposition will take place.
<b>SPRINKLE</b> "SUN-MAR" Compost Swift into the drum. (Dilute 1 part Compost Swift with 8 parts of water)	This is a mixture of specially prepared microbes and enzymes to assist in breaking down the compost.
<b>ROTATE</b> the drum after shutting the door.	This will mix, aerate, and distribute moisture throughout the compost.

### Ongoing Maintenance

The procedure below is designed to keep the compost:

- Moist, but not too wet
- Well Balanced and aerobic
- Well Aerated and mixed
- Moving through the unit

Action	Why?
<b>ADD</b> waste to drum as finely chopped as possible. Chop larger pieces up into 1" pieces.	The smaller the pieces the more surface area is presented to the microbes and the faster decomposition will take place.
<b>ROTATE</b> drum four or more complete revolutions twice per week. Leaving the drum door at the top when complete.	Rotation will distribute moisture, provide oxygen, and mix and even out the waste levels inside of the unit.
<b>OPEN</b> output port while rotating when the compost is filling half or more of the drum.	Compost will discharge through output port.
<b>ADD</b> SUN-MAR Compost Swift	Helps speed up composting action.

## What to Compost

A wide variety of waste materials from the kitchen can be composted in the SUN-MAR 200. The menu would include vegetable and fruit scraps, egg shells, corn husks, coffee grounds and tea bags.

In addition the SUN-MAR 200 is big enough to handle some material from the back yard, but care should be taken to make sure that the amount of garden trimmings does not exceed the available capacity in the drum.

A pure diet of kitchen waste approximates a reasonable Carbon/Nitrogen ratio, but you may find it helpful to add a few “brown” ingredients such as straw, dried leaves, or peat moss.

Common sense should be used when adding larger items. Shred or chip them into smaller pieces. Remember the more surface area, the faster it will compost. Chop larger items into 1” pieces.

## What Not to Compost

If you want to use your compost on food producing gardens, do not add pet excrement. Also, it is best to stay away from dairy products, meat scraps and bones because these foods can produce bad odors and attract pests.

Cedar shavings and pine needles are best left out of the mixture, because they will actually slow down your compost pile.

Lastly, nuisance weeds should be composted before they seed so that you are not unwittingly propagating new weeds!

## Step 6

Place vents over holes in the bottom of the drum. Push vents into holes until they are flush with the drum. These vents will function as drains.



## Why Compost

Food and garden waste make up a good percentage of the waste your family produces. Composting allows you to divert this waste, and at the same time offers a valuable source of humus for your own use.

This finished compost is one of nature’s best soil amendments. Not only does it provide the nutrients your plants will need, but it also improves soil texture, aeration and the soil’s ability to hold water. Compost can also cool the soil’s surface and help reduce erosion.

As an added bonus, home composting also provides a valuable educational tool for teaching children about recycling and conservation. If it gets children thinking about biology and voluntarily participating in gardening, isn’t it worth the effort?

## How Composting Works

Home composting is a natural recycling process in which organic waste is broken down by microbes into minerals and so converted back to earth.

The trick is to get your compost to decompose as fast as possible. The rate at which it breaks down depends on several factors including: oxygen, warmth, moisture, and surface area.

Oxygen is required by the aerobic microbes in the compost as they transform the organic material into carbon dioxide, water vapor and basic minerals. Turning the drum on a SUN-MAR Composter is an easy way of getting oxygen into the compost and encouraging aerobic composting to continue.

Although microbes develop their own heat (causing the core of the compost to get very hot) composting speeds are slower in cold weather. Freezing weather can force the microbes to become dormant.

A Good compost needs to have a moisture content of between 40% of 60%. The microbes work at the interface between air and moisture. Moisture allows them to circulate within the compost. If the compost becomes too dry, composting will slow down and eventually stop. If there is too much moisture, the compost becomes saturated and suitable only for the slower activity of anaerobic microbes. Rotating the drum on a SUN-MAR composter distributes the available moisture evenly throughout the entire compost.

Lastly, the surface area of the organic material is important. The smaller the pieces, the more surface area there is for the aerobic microbes to work on, and the faster the rate of decomposition. Larger pieces should be chopped up into 1" pieces for this reason. Tumbling the drum on a SUN-MAR composter exposes different material surfaces to the aerobic microbes and speeds up decomposition.

## How Your SUN-MAR 200 Composter Works

Position your composter on a flat surface. Although the wheels allow it to be moved on a hard flat surface, it is easier not to have to relocate it.

To add material, open the input port, place the material in the outer drum, and close the port. Rotate the drum by using the ribs on the drum. This rotation will level the compost in the outer-drum, and move it gradually away from the input port end.

As the level in the drum rises, the rotation of the outer drum will increasingly start to feed compost into and along the inner drum. Eventually, when the output port door is removed, composted material will feed slowly out of the output port, and into a container.

