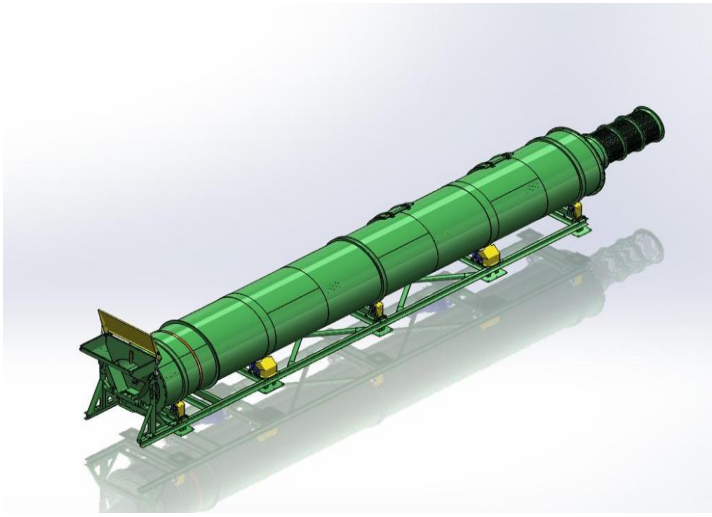
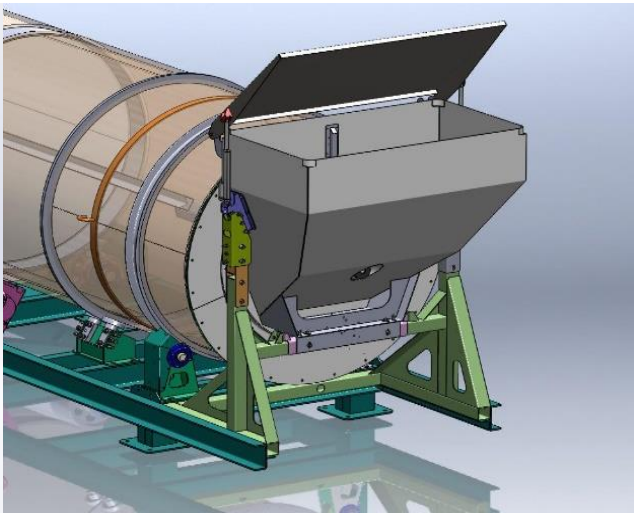
Green Power™ Composter

Simplified Scientific Composting

That organic waste such as banana peel in the waste bin will eventually, naturally decompose, thanks to helpful microorganisms in the environment that feed on the decaying waste.

Composting is a process that works to speed up the natural decay of organic material by providing the ideal conditions for waste-eating organisms to thrive. The end-product of this concentrated decomposition process is nutrient-rich soil that can help crops, garden plants and trees to grow.





The composting processes

Microorganisms are vital to the composting process and are found everywhere in the environment.

The key to effective composting is to create an ideal environment for the microorganisms to thrive, such as warm temperatures, nutrients, moisture and plenty of oxygen, all in balance.

Essential nutrients required by micro-organisms to flourish and produce adequate heat must be in balance.

Optimum ratio of Carbon to Nitrogen must be between 25 - 40/1 with 45 -65% moisture for best microbial activity.

Microorganisms can only consume nutrients that are dissolved in water. Air is used in the process of breaking down material.

If C/N ratio, oxygen, and moisture are in optimum range, composting temperature will reach to 60-65C°.

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	MODEL 5	MODEL 15	MODEL 30
Max Daily Intake Capacity	500kg	1500kg	3000kg
Drum Volume	$12m^3$	$26m^3$	$73m^3$
Body Material	Industrial Steel		
Motor Power	2 x 1.5kW	2 x 4kW	2 x 4kW
Electrical Requirement	400v 3-Phase 50hz 20A		

Composting Guidelines

A by-product of the Green Power Composter® is the creation of a valuable soil amendment. The following information on the composting parameters of the Green Power Composter® should be viewed only as a guideline.

Every installation will vary due to differing materials utilized in the composting process.

- Ideal moisture level is @ 50 - 65%
- Composting temperature = 55-65° C (the closer to 65° C the better/faster)
- The Australian Standard for Composting (AS4454-2012) require minimum temperature of 55° C for a period of three consecutive days to ensure adequate pathogen destruction. For example, Avian Influenza is killed within 8 minutes after reaching 55° C (USDA).
- However, temperatures over 65° C will start to kill off some of the microbial activity that is desirable for soil enhancement.
- Optimum Oxygen level = 5 -16%
- Carbon to Nitrogen ratio should be between 25/1 and 40/1

Note; the carbon needs to be “available” carbon, small chunks of wood do not qualify as available in a composting recipe, but are desirable to help with aeration of the pile.

Bulking material / Carbon source options;

- Sawdust/shavings
- Hay/straw
- Poultry/Broiler manure
- Horse manure
- Grass clippings, Leaves
- Paper products (cardboard)

Some heat loss will occur when the drum is rotated, however, rotation is necessary to introduce oxygen in order to speed up the composting process.

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