

# ┆ Composter ┆



Composter

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## Composter 310 and 660 the magic of nature

**Thanks for choosing the environment.**

Dear Customer, we compliment you for choosing our Composter and for accepting to take part in the organic waste composting project.

Home composting is an efficient way of considerably reducing the quantity of organic waste we produce and of ob-

taining valuable compost instead.

This is an easy decomposition procedure, and we let nature completely take care of it!

To make the procedure even easier, we are happy to provide you with a little manual with a few easy suggestions.

You will not find any com-



licated scientific explanations.

Just a few simple technical notions for a proper and efficient use of this innovative instrument.

Don't let the user instructions scare you, because you'll see that home composting is easier to use than to explain.

Happy composting!

## **Compost? We make it ourselves, naturally!**

All organic waste contains precious organic materials that must be given back to nature because the soil needs them for new plants, flowers and fruits.

So, let's keep it and use it to our advantage with the Composter 310 or 660!

Inside it, the Composter is abuzz with a quiet ferment of activity. In this warm, moist and nutrient-rich environment, small insects, earthworms, bacteria and all sorts of microorganisms thrive and work to decompose the contents and turn them into compost, which is ideal to fertilize your garden plants and have

more beautiful flowers, without the need of chemical fertilizers.

There is always work for these organisms to be done. Every day we generate new organic waste for them: left-over food, fruit scraps, spoiled vegetables, coffee and tea grounds, cut flowers, grass clippings, leaves...

The Composter has copied nature and helps it. It is an attractive container that we can all use, in which are created and maintained all the ideal conditions for decomposition — a completely natural process — to take place rapidly, safe from the negative effects of climatic conditions.

Depending on the season,

only a few months are required to “complete a cycle” and obtain a rich compost.

You can easily tell when a compost is mature. A mature compost looks and feels like a dark, soft, spongy soil, with the typical smell of “undergrowth”: a prized, nutrient-rich and completely natural fertilizer made only with the waste materials we choose ourselves.

It is easy to make and safe to use, because it is our own compost.

## — Installation



### **Installing the Composter: where and how**

Before starting to assemble the Composter, choose carefully the best place to place it:

- Choose a convenient place where to introduce the waste from the kitchen and the garden; in sunlight (in cold climates) or in partial sunlight (in warm climates).
- Set the Composter on firm ground to avoid its sinking into the ground.
- Follow the assembly instructions for each composter model.



# + Composter 660

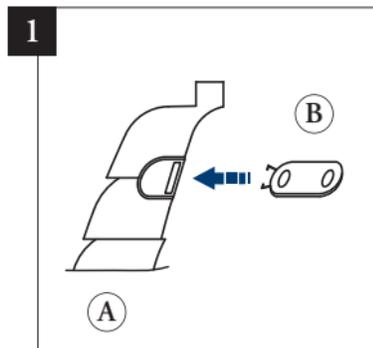
 <p>(A)</p>	 <p>(B)</p>	 <p>(C)</p>	 <p>(D)</p>	 <p>(E)</p>
REF	COMPONENTS			PIECES
(A)	Composter body sectors			4
(B)	Snap clips			12
(C)	Base sectors			4
(D)	Aeration cone			1
(E)	Lid with ring			1

## Assembly instructions

Please read these instructions carefully before using the Composter.

**1**

Remove the four sectors of the composter body (A) from the packing. Mount the snap clips (B) in their proper places and



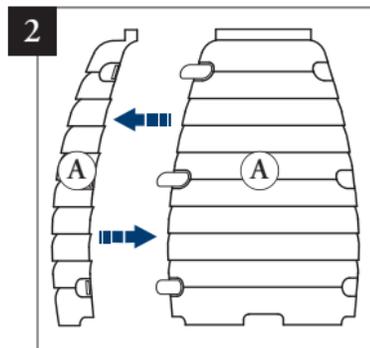
latch the ends of the metal fasteners into the vertical slots.

**2**

Draw two sectors of the composter body (A) together and join them perfectly along their vertical edge.

Tighten the three snap clips with a slight pressure.

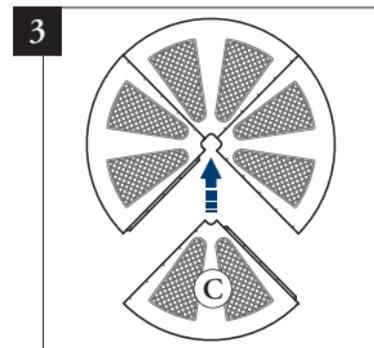
If the two sectors of the composter body are properly



matched, it is not necessary to apply any force on the clips.

**3**

Assemble the four sectors of the base (C) by locking them together in the relative positions. Set the assembled base down inside the two sectors of the composter body assembled as described at point 2, aligning the aeration channels on the



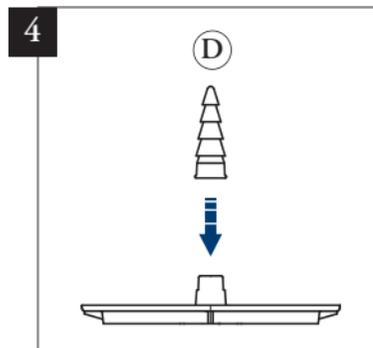
## Composter 660

base with the slits on the sectors of the composter body.

4

Install the aeration cone (D) on the base.

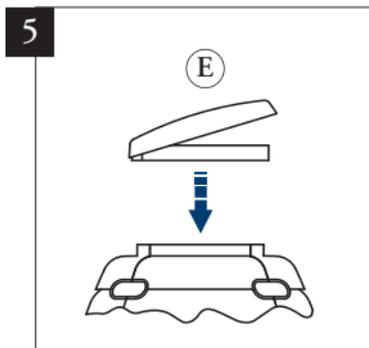
Join the third and the fourth sectors of the composter body to the two previous ones as described at point 2, and lock in all the snap clips.



5

Install the lid (E) and fasten the ring around the mouth of the composter by matching the tongues with the holes on the ring.

To remove the mature compost, lift the ring with the lid and release one or two sectors of the composter body, as required.





## + Composter 310

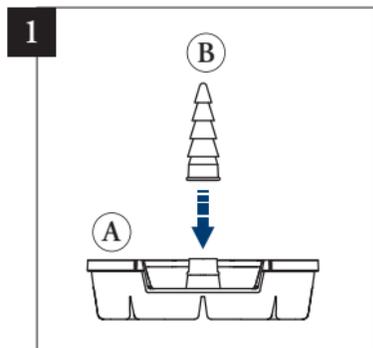
				
(A)	(B)	(C)	(D)	(E)
REF	COMPONENTS	PIECES		
(A)	Base	1		
(B)	Central aeration cone	1		
(C)	Composter body	1		
(D)	Side door	1		
(E)	Lid	1		

## Assembly instructions

Please read these instructions carefully before using the Composter.

**1**

Remove the base (A) from the packing box and set it down on a perfectly level place. Mount the aeration cone (B) in its seat



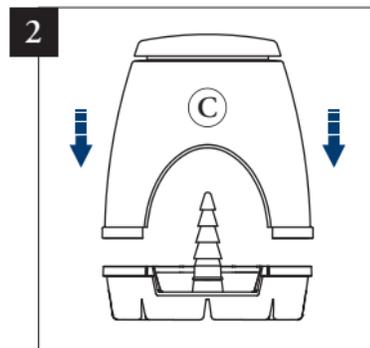
at the centre of the base.

**2**

Install the composter body (C) on the base, making sure that the opening on the base matches the opening on the composter body.

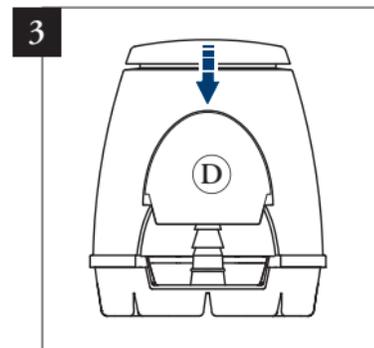
**3**

Install the side door (D) by



sliding it down vertically on the relative guides positioned beside the opening on the composter body and apply a slight pressure around the edge of the side door.

To remove the mature compost, lift the side door to extract small amounts of compost or lift the whole composter body to remove all the compost.



## — The optionals



### **BioBin: to sort out organic kitchen waste**

BioBin makes it easy to sort out our organic kitchen waste and is a handy way to collect the waste before placing it into the Composter. BioBin takes up little space and is arranged to take biodegradable bags. The biodegradable bags (check that they bear the relative mark), just the same as paper bags, can be put

straight into the Composter together with their contents. Organic kitchen waste often contains a lot of water, and therefore some liquid may pool at the bottom of the BioBin. The suggested way to prevent excessive moisture in the Composter is to:

- avoid pouring the liquid that forms at the bottom of the BioBin into the Composter, unless the waste decomposing inside the Composter is too dry;
- place some blotting material at the bottom of the BioBin; this will also make it easier to wash it.

### **The aerator: always at arm's reach**

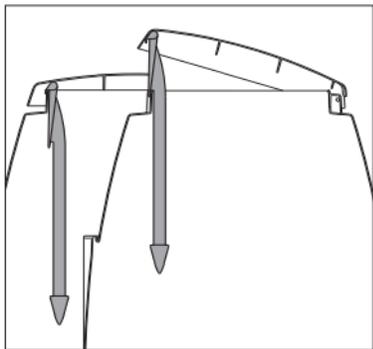
The aerator is an extremely useful instrument to stir waste undergoing decomposition inside the Composter. Stirring



means increasing the oxygenation of the waste and therefore improving and speeding up the process of decay.

The special grip and its shape allow the aerator to always be kept inside the container, positioned on the edge of the Composter and always within easy reach: the more we stir the waste, the better the results.

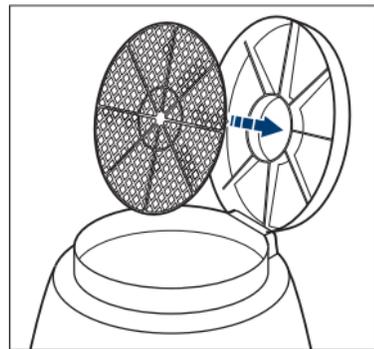
The aerator can be posi-



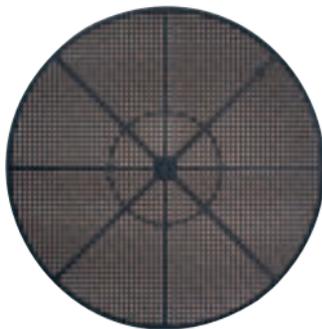
## The Bio-accelerator

The Bio-accelerator initiates and speeds up the decay of the organic waste placed into the Composter.

Use the Bio-accelerator according to the instructions on the package.



## The insect screen: a further protection



The insect screen is applied by pressure on the inside of the lid: allow the central part of the screen to match with the central part of the lid and apply a slight pressure. The metal restraints create an interference that fixes the screen to the lid. The application of the insect screen on the lid does not create any problems in opening or closing the lid.

tioned on the edge with the lid closed, or it can be fixed so as to allow the lid to stay partially opened.

The suggestion is to leave the lid in a partially open position when the waste inside the Composter is too wet or if there are fruit flies.

The partly open lid favours the evaporation of excess moisture and further improves aeration.

## — Instructions for use



### Filling the Composter

- When filling the Composter for the first time, it is advisable to place into the container a pail of mature compost or create a bed of twigs, straw, chips and leaves.
- Place the organic waste into the composter, following the simple suggestions of the

manual.

- Pay attention to the proper C/N ratio of the materials (see page 18), but most of all to moisture.

An excessive amount of moisture prevents the aeration (oxygenation) of the heap.

- Mix the contents in the composter periodically using the special aerator stick.

Glass, plastic, paper, tin or aluminium cans, etc., are sorted to be recycled separately, while most of organic waste can be turned into compost.

Do not mix any flammable, toxic or generally harmful substances with the organic waste.

The following tables give some useful suggestions and instructions.

## Which waste is OK and which isn't, and why

Legend	Types	Description and suggestions
☺ ☺	Fruit and vegetable waste, vegetable leftovers (cooked and uncooked)	They are very suitable and form an excellent composting base; be careful with water: do not add the water that forms in the BioBin
☺ ☺	Cut flowers, wilted plants	Any wood parts should be chopped up into small bits
☺ ☺	Stale or mouldy bread	Break it up into small pieces
☺ ☺	Coffee grounds, tea bags	The filter can also be recycled
☺	Peels of untreated citrus fruit	Do not exceed the normal quantity of one household
☺	Small scraps of meat, fish, cold cuts	Use in limited quantities; cover them with soil or stir to prevent the proliferation of flies
☺	Carton	Better send them to the customary sorted waste collection; bits of untreated carton can be useful to "dry" a soaked heap
☹	Magazines, colour prints, glossy paper	Send to sorted waste collection

## Instructions for use

😊😊 Very suitable

😊 Suitable, follow the instructions

☹️ Not recommended

Legend	Types	Description and suggestions
☹️	Vacuum cleaner filters	Not suitable
☹️	Fabric, cotton	Send to sorted waste collection
😊😊	Leaves	Moisten them if dry
😊😊	Grass clippings	Allow them to dry; mix with other materials (see C/N ratio); avoid excessive quantities and overloads of mowed grass alone; mix periodically
😊😊	Branches, chips, waste from the flower garden	Excellent material to provide structure to the heap; chop them into small pieces
😊😊	Vegetable garden waste	Avoid pest-infested or diseased plants
😊	Poultry droppings, manure, animal droppings	Nitrogen- and nutrient-rich materials; mix into the heap and cover them
☹️	Waste from treated or painted wood	Not suitable; dispose of in the proper collecting/recycling system



## Removing the compost

When the waste has turned into a soft spongy soil, the compost is ready to be used.

If the composter is full but only half the heap is mature compost, it is advisable to empty and reposition the composter.

Proceed as follows:

- open the Composter as shown in the assembly instructions;
- remove the still undecomposed part of the waste heap and put it aside; it can be used as a base for a new cycle;
- use the mature compost as fertilizer as required;
- clean and reposition the Composter according to the assembly instructions;
- place the undecomposed waste previously set aside into the composter;
- start a new cycle.

## — Suggestions and solutions

### **The golden rules to make an excellent compost**

- **The right temperature.**

The activity of microorganisms during the composting process generates heat, increasing the temperature in the pile.

In the first phase, the temperature at the centre of the composting heap is normally in the order of 45° to 55°C, the ideal range for the microbes to carry on their work. Afterwards, there is an intermediate phase and a final phase in which there is a progressive drop in temperature, until ambient temperature is reached.

- **The right humidity.**

Like air, water is essential for the activity of the microorganisms in the compost and must be present in the pile in a proper amount. In fact, if the pile is too

dry, microbial decomposition slows down considerably; to prime it again it will be necessary to sprinkle and loosen the heap with the special aerator stick.

On the other hand, a waterlogged heap cuts down the oxygen supply, and decomposition will turn into a malodorous decay (due to an anaerobic reaction). In this case, the heap will have to be loosened and mixed with dry matter, like wood shavings, dry leaves and bits of carton.

It is absolutely necessary to strike the right balance between water-rich waste and dry waste. Therefore, add into the composter the quantities of waste that will make the heap moist, but not wet.

The proper moisture level can be checked with the “fist” test: take a fistful of material and squeeze it hard: if the material

holds together without dripping water, the moisture is right; if on the other hand it crumbles, it means it is too dry.

- **The essential oxygen.**

Compost is “live” and therefore needs air. In a compact heap oxygenation is stifled, and the microorganisms responsible for breaking down the organic waste cannot be viable.

In the Composter, air enters the container through special slits and flows through the heap; therefore the pile inside the composter must not to be compacted (watch the excess moisture!) but soft and structured: this is made possible by the addition of rougher material such as twigs, chips, leaves, straw, etc.

It is a good practice to periodically turn over or loosen the heap using the special aerator stick in

order to favour aeration.

Lack of aeration causes the formation of malodorous composts that can be easily avoided by following the above suggestions.

- **Carbon and nitrogen.**

The C/N (carbon/nitrogen) ratio is an important factor in the composting process. Carbon-rich materials are a source of nourishing energy for the life of microorganisms, while nitrogen is essential for them to grow and multiply.

A proper C/N balance favours a rapid decomposition: if the prevalent material consists of carbon-rich waste such as leaves, twigs, sawdust, etc., the process is very slow due to lack of available nitrogen; this can be solved with the addition of food leftovers.

On the other hand, an exces-

sive amount of nitrogen-rich kitchen waste releases excess ammonia and causes bad odours. In this case, it is sufficient to add chopped twigs, leaves, bits of carton, etc., and to mix them into the material to favour oxygenation.

The following table shows some average values relative to

the carbon/nitrogen ratio of compostable waste materials.

The composition of the materials and therefore the correct ratio can be determined by using the data of the table and the following proportion.

For good results, the average C/N ratio should be about 25, or 30 at the most.

$$\text{C/N MIXTURE} = \frac{[(\text{Weight of comp. 1}) \times (\text{C/N comp. 1}) + (\text{Weight of comp.2}) \times (\text{C/N component 2}) + \dots]}{\text{Total weight of mixture}}$$

ELEMENT	C/N min.	C/N max.	C/N average
Sawdust and wood chips	80	230	155
Prunings	58	188	123
Straw	55	125	90
Leaves	27	92	59,5
Flower garden waste	20	60	40
Grass	19	21	20
Vegetable garden waste	13	13	13
Kitchen waste	12	20	16
Vegetable scraps	12	24	18
Bones and animal waste from the kitchen	10	14	12
Poultry droppings	9,6	12,5	11,05

## — Suggestions and solutions



### Frequently asked questions... and practical answers

- Why use the Composter 310 and 660?

The Composter is useful to recycle some waste at home and obtain from it a valuable fertilizer for our own flower and vegetable garden.

Some local administrations also give incentives for home composting.

- The Composter 310 and 660 has a large perforated base. What is it for?

The base is very important: it prevents the entrance to unwanted pests, while the perforations favour the exchange of breakdown organisms with the soil.

- At the centre of the base there is a pine-shaped cone. What is it for?

It is the aeration cone de-

signed to allow oxygenation at the centre of the heap through the anti-plugging holes

- I have installed the Composter, I keep adding waste, but it never seems to fill up.

Organic waste contains a large percentage of water that evaporates as the material decomposes, with a consequent considerable decrease in volume.

- Certain types of waste cannot be composted. Why?

Some types of waste decay fast, others decay more slowly: for example, nut shells, eggshells, woody parts, vegetables or fruits (cabbage cores, fruit stones), bones. Just break them up into smaller pieces and/or put them back into the composter for another “cycle”. Care should be taken with

such materials as potato peels, citrus fruits, chestnuts: when they have been “treated” by the producers to extend their life, they may decompose very slowly.

- **It seems like nothing is happening to the waste put into the Composter.**

After the first installation, it takes a little longer. It is necessary to provide a texture in the heap with a certain quantity of materials; a culture of break-down bio-organisms must be created, and nature has its own pace. Pay attention to the composition of the mixture so as to have as much as possible a proper C/N ratio (see page 18).

- **The heap generates bad odours.**

This is the typical sign that something is not working. In normal conditions, the heap should smell like undergrowth. Very likely, there is an excess moisture; in this case it is sufficient to add dry matter in the composter and mix it into the material. If the weather is good for a few days, it is a good idea to leave the lid open to allow excess moisture to evaporate more rapidly.

- **The contents of the Composter are dry and don't decompose.**

It is sufficient to add moist kitchen waste or sprinkle and mix the contents: the different types of waste blend together, favouring oxygenation.

- **How can I improve the production of compost?**

If you are in a hurry to see

results, you can use “compost accelerators”, products that are rich in selected microorganisms and nutritional matter, available from gardening supply stores.

- **How do I use the mature compost?**

The mature compost can be used like a normal fertilizer, preferably mixed with the soil.

The materials used in making the Composter and the optionals are not included in the list of harmful substances. Once these materials are no longer needed, they should be disposed of according to normal procedures, considering that the steel and plastic parts are recyclable.



Viale Venezia, 113 • 33100 Udine • Italy  
Tel. +39 0432 531521 • Fax +39 0432 530727  
[www.mattiussiecologia.com](http://www.mattiussiecologia.com)  
e-mail: [info@mattiussiecologia.com](mailto:info@mattiussiecologia.com)

