

BIGHANNA™

composter

TECHNICAL INFO

SIMPLE AND SAFE COMPOSTING

Food waste is loaded at the front of Big Hanna and compost is automatically discharged to the rear. Big Hanna is manufactured in stainless steel and is, of course, CE-marked.

OPTION - HOPPER FED INLET WITH OR WITHOUT A SHREDDER

For models T60, T75 and T120 which handles larger volumes, a hopper fed inlet could sometimes facilitate the handling of the food waste. As an option a shredder can be fitted together with this inlet. This solution with a lock-on system gives us the opportunity to offer customers to buy a hopper/shredder unit after the machine is already installed. Read more in a separate brochure.

OTHER OPTIONAL EQUIPMENT

Bin lift for 80 litre standard bins is optional on model T240. Logging of temperatures and monitoring via modem is available for models T60-T240. Read more in separate brochures.

OUTDOORS / INDOORS

Big Hanna can be installed indoors as well as outdoors. When installed outdoors we recommend that there is a roof over the machine to make feeding and servicing more pleasant.

NOISE

Big Hanna rotates on an average 1-2 minutes every 1-2 hours. There is not much sound from the machine even when it is rotating. When a shredder unit is installed the noise level can be higher depending on what is put into the shredder.

LOCKABLE SWITCH

CE-mark requires that the wire delivering main power supply to the mounting enclosure must have a lockable switch which is marked EMERGENCY STOP and coloured in red and yellow. This is not enclosed at delivery but must be installed for safety reasons.

Model T40: 230V, 10A, 1 phase.

Model T60, T75, T120: 400V, 10A, 3 phases.

Model T240: 400V, 16A, 3 phases



MODEL T240



MODEL T60



MODEL T40



HOPPER FED INLET WITH OR WITHOUT A SHREDDER FOR MODEL T60, T75 AND T120

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Model	Capacity kg / week	Number of households
T40	75-100 kg	15-35
T60	150-250 kg	55-70
T75	225-325 kg	70-90
T120	300-500 kg	90-135
T240	400-1200 kg	135-300

CAPACITY / RESTAURANTS AND CATERING FACILITIES

The waste material from restaurants often contains large volumes of similar types of material. This can lower the capacity of Big Hanna as a "balanced diet" is very useful for an optimum throughput. Food waste from restaurants also tends to be fresher than from housing and this can slow down the onset of the biological process. Prior to ordering we recommend that the food waste from the kitchen is weighed for one week. This should then be compared with number of meals served for this week in order to see what a "normal" amount of food waste per week is.

DRAINAGE OF WATER / RESTAURANTS AND CATERING FACILITIES

Waste material from restaurants often contains a large amount of water. All material should if possible be drained from water. If a lot of soup, sauce etc is put into Big Hanna it is necessary to add more absorbent material i.e. wood pellets. If the moisture content is too high this will effect the biological process. The material can be drained by using simple bins with holes.

CAPACITY / HOUSING

Households in residential districts will produce an average of 4-5 kg of organic waste material per week. Households in apartment buildings produce an average of 2-3 kg of organic waste material per week. These figures will vary according to the demography of the population. Many residential areas will also provide green waste which Big Hanna Composter can also process.

STARTING UP

It can take anything from 8-12 weeks for the machine to get up and running with a healthy biological process and producing compost. In the initial stages of the start up period more wood pellets/sawdust needs to be added and less food waste than later on. It is a good idea to continue with your regular food disposal system during this initial period whilst Big Hanna's capacity builds up.

TEMPERATURE SENSORS

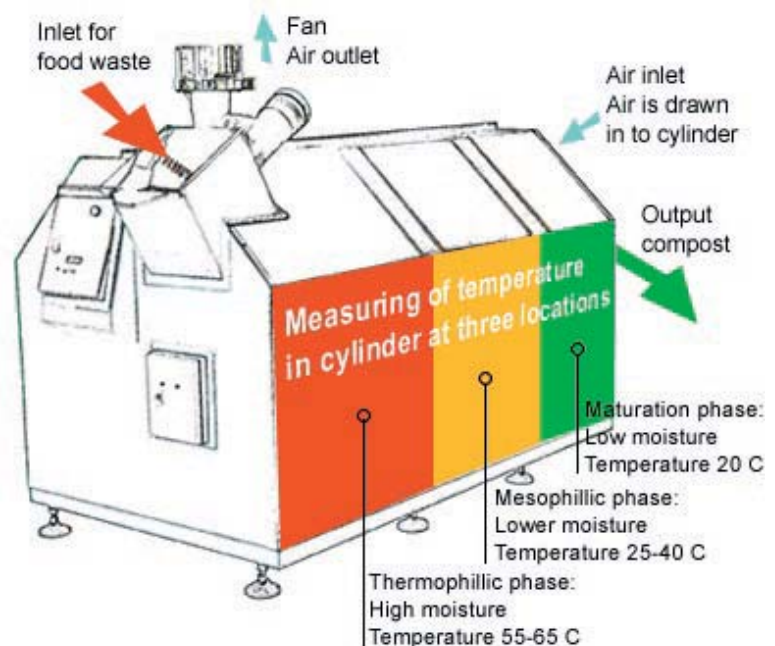
Model T60, T75, T120 and T240 are equipped with temperature sensors.

The temperature is measured at three locations in the cylinder, the front, middle and back. The temperature is shown in the digital display at all times showing the current temperature. These measurements should only be considered to be indicative since the heatzone could be in between two measuring points. Naturally the compost must still be inspected on a regular basis since the temperature is only one of many parameters needed to obtain a good biological process.



When the biological process has settled in the cylinder the temperature curve should be as shown in this drawing below. The food waste is put into the inlet and the temperature rises and the thermophilic phase begins. At normal input the 'hot zone' with temperatures reaching 50-65°C should be situated at the front of the cylinder.

The digital display can be connected to a PC and the temperature in the cylinder can be logged and the process controlled from the PC. It is also possible to attach a monitoring system from which the temperatures can be monitored by connecting to the machine via a modem. More information about these options are available in separate brochures.



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MAINTENANCE

The time it takes to feed the machine is dependent on the size of the machine, what kind of bins you use, size of the bins and how you feed Big Hanna. Each kitchen's waste handling is different and many factors should be considered such as which individual will be responsible for Big Hanna, what type of bins can we collect our waste in and how can we drain food waste or excess wetness?

CHECK-UP 2-3 TIMES/WEEK (5-10 MIN)

- ✓ See to it that air is passing freely
- ✓ Clean the net cone if necessary
- ✓ Check smell and heat through the inlet pipe
- ✓ Add absorbing material

CHECK-UP ONCE A WEEK (10-15 MIN)

- ✓ Check the compost
- ✓ Check fan and operating motor

WHEN NEEDED

- ✓ Change plastic bag
- ✓ Screen the material

FEEDING

The inlet on model T40-T120 looks like in the picture below. The inlet on model T240 is only 1 m in height and 80 liters in volume.



INSPECTION DOORS

Big Hanna has one or two inspection doors, depending on model, where you can check the biological process inside the machine.



ABSORBENT MATERIAL

The biological process in Big Hanna Composter needs absorbing material. The absorbing material is usually added in the form of wood pellets which efficiently soaks up excess moisture. They are also carbon rich thereby contributing to the balance of the biological process.

Pellets is short for "pelletized sawdust" which is produced in order to be used as fuel. The pellets will swell to about 3 times their size so the volume of Pellets needed for Big Hanna is much lower than using sawdust. Sawdust can also be used in the Big Hanna Composter as well as other absorbent material.

Household waste	10 volume-%
Waste mostly from fruit and vegetables	5 volume-%
Restaurant waste	20 volume-%

TIME IN CYLINDER

Keeping all material in the cylinder for 8-10 weeks ensures that the compost is safe to use, free from odour and pathogens. In that time the reduction of the food waste is up to 90%.

AUTOMATIC EMPTYING

Big Hanna empties the compost directly into a plastic bag that is attached on the outlet pipe. When the bag is full it is replaced with a new bag and the compost is taken away.



SIFTING THE MATERIAL

Even in the best managed kitchens "foreign bodies" such as bottle tops, plastic, forks etc will enter into the food waste. In addition bones will not bio-degrade though they will be cleaned of all putrescible material. It is therefore recommended that the compost is "screened" through a wire or metal mesh after exiting from the Big Hanna.



USING THE COMPOST

By mixing one part compost with 5 parts loamy soil the compost is ready for application. Alternatively you can store the compost directly on the ground allowing worms and microflora to work their way into it, making it even better and more mature.

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AIR / SMELL

One of key issues in obtaining a well functioning compost is aeration. In order to lead the exhaust gas and smell away from the cylinder and the room where the composter is installed, the fan creates a negative pressure inside the cylinder. The air is transported from the room (or open air) where the composter is installed into the front the hood. The air is then drawn in between the hood and the cylinder and further into the cylinder at the rear gable. From the cylinder the air is then sucked by the fan through the front gable and it must then be led from the fan. Note that the plastic bag on the outlet pipe must be well attached to make the ventilation in the biological process work. To minimise smell in the room where the Big Hanna is installed the smell is led to the sewage, into a bio filter or above the roof.

AVOID COMPETING EVACUATION

If the room where installation is made is forcibly ventilated, existing ventilation ought to be shut off since the composter continuously draws air out of the room and a competing evacuation might counteract the ventilation of the composter and pull the exhaust gas back into the room.

LENGTH OF THE PIPES

Airflow from the fan is 0,085m³/s or 305 m³/h. The exhaust air is led from the fan by 110 mm sewage pipes. The total length of the ventilation pipe is not recommended to exceed 15 m with a maximum of four 90° angles from fan to outlet. The fan's capacity is equipped to handle this resistance in airflow. When adding more angles or longer ventilation pipes the aeration of the material inside the composter may not be sufficient resulting in a poor biological process. In the existing soil pipe there usually is negative pressure and therefore it is possible to install ventilation with longer distance than recommended above.

VENTILATION IN TO SEWAGE

In existing soil pipe there usually is negative pressure and therefore it is possible to install ventilation with longer distance than recommended above. A trained professional must examine each specific case. Where the negative pressure is very good the ventilation distance can be very long. A draining well that is connected to the same pipe as the ventilation of the composter can sometimes dry up and exhaust gases are pushed up from the well. In order to avoid this we recommend to put some corn-oil in the water seal. The fan is transporting warm moist saturated air out from the composter. When the air is cold in the ventilation pipe automatically there will be condensation water. The condensed water together with the air from the fan must both pass to the main sewage system where you have the negative pressure. The connection to the sewage should be done so there is no risk for a water seal anywhere in the PP-pipes or in the sewage system.

HANNA BIOFILTER

The Hanna biofilter ensures that there is no smell in the airflow that is led outdoors. This is a preferred option to an outlet over the rooftops. The air is pushed into the biofilter and filtered through bark and the smell is reduced significantly. More information can be found in a separate brochure.

VENTILATION IN THE OPEN-AIR

Where the composter is installed in a free open space the ventilation can be installed with the outlet over the rooftops. If this is the case the outlet must have a net or a small cover on top of the ventilation pipe. Considering that large amounts of animal waste sometimes is put into the composter and this can be smelly the outlet must be set at least 50 cm above the roof of the building to make sure that the wind will disperse the smell. When you install ventilation in the open you always

must install the ventilation pipes with fall towards the composter. A condensation trap must always be installed.

- Big Hanna
- √ Reduces the food waste with up to 90%
- √ Cylinder and fan in stainless steel.

CLEANING

It is very important to keep the area around the Big Hanna clean to get a hygienic installation site. If food waste is spilled on the floor there will undoubtedly be a problem with smell. In restaurants we especially recommend that water (hot water if possible) is available for cleaning buckets and keeping the machine tidy.

WARRANTY

Machine warranty is one year.

INFORMATION

In housing areas each houseowner/tenant receives a leaflet on what to put in the Big Hanna and what not to put in. A poster like this below should also be placed near the machine

