



Q & A's

Waste₂0™ - Model W20.180

What does it do?

Waste₂0 rapidly digests soft food waste and converts it into grey water which runs away to drain – simply throw in the food and walk away. The process is called aerobic digestion, and a naturally occurring blend of microorganisms help with this process.

What can I put in the machine?

The machine will take soft organic food waste such as fruit, vegetables, cooked and uncooked meat, fish and so on. The general rule is that if a human can eat the food, the Waste₂0 can process the food.

What can't I put in the machine?

The machine cannot process anything that is not organic food waste and cannot be easily broken down such as bones, seeds and stones, flower stems, packaging, general waste, cutlery, crockery etc. The general rule is that if a human cannot eat the product, then Waste₂0 cannot process the product. **This is important because placing the wrong products into the machine could cause damage and could void the warranty.**

What stays out:

- Meat and fish bones
- Raw dough, flours
- Pineapple tops
- Fruit & vegetable seeds and stones such as mango, avocado, peach etc.
- Corn Husks, Flower stems
- Oil, fats, soups
- Frozen or chilled food (wait until room temperature)

What goes in:

- Soft organic material such as
- Meats (cooked or uncooked)
- Fish
- Fruit and vegetables
- Pasta, Noodles, bread crumbs, rice

NB: just like a person - do not put too much of any one kind of food into the machine at any one time. A balanced combination of food waste will digest better.

If anything accidentally drops into the machine, is it safe to fish it out by hand?

Yes. There is a paddle mechanism inside the machine that slowly rotates to stir the food waste, but this automatically stops as soon as the machine lid is opened. Rubber gloves should always be worn when retrieving anything from inside the machine.

How much organic food waste can I put in the machine?

Operators can continually “top up” the machine with food waste – up to 45kgs at any one time. A general rule-of-thumb is to fill up to the axle. Much like the human digestive system, the machine gradually processes the food. Trying to put too much food waste into the machine at one time will overload the machine and slow the process. The machine can process a maximum of 180kgs of organic food waste over a 24-hour period.

What if my operation has a period of the day when a significant amount of organic food waste is produced - lunchtime for example?

This is very common and is easily overcome by scheduling the loads of food waste put into the machine. Food waste in excess of what the machine can process at any one time should be stored ready to be put into the machine later in the day once the machine has had a chance to process what it already holds.

If the Waste₂0 control panel's amber 'WAIT' light is on, the machine has sensed that it is working at full capacity. Note that the Waste₂0 lid will automatically lock while the 'WAIT' light is on. As soon as the machine has digested some of its load, the 'WAIT' light will go out and the machine lid will automatically unlock.

Do not attempt to force the machine lid open while the 'WAIT' light is illuminated. Doing so could void the machine warranty.

Operational tip: Every time the Waste₂0 lid is opened, a small amount of power, water and microorganism is used. Try to minimise the number of times the machine lid is opened by keeping a sealable food waste bucket by the machine. Open the machine lid and pour the food waste in only when the bucket is full.

Have you any details on how often during the day food waste can be loaded into the unit, e.g. can 180kgs be loaded into the machine in one go, how long would it be before it can be used again and how much extra would it be able to take?

The machine can process a maximum of 180kgs of organic food waste over a 24-hour period. Operators can continually “top up” the machine with food waste – up to 45kgs at any one time. A general rule-of-thumb is to fill up to the axle. If the machine is overloaded, the shot bolt will activate. It is almost impossible to gauge when the next load will be ready, as it depends what kind of food waste went in. Some food groups take longer to digest than others. If the ‘**WAIT**’ light comes on each time you “top up” with food waste, then you are constantly overloading the machine and this could reduce the life span of the machine.

How do I put food waste into the Waste20?

Simply open the machine lid and pour the food waste through the hatch onto the woodchips inside, then close the lid.

Why are there woodchips in the machine?

The woodchips are impregnated with specially blended microorganisms that break up the food waste. The woodchips remain in the machine all of the time and only need topping up every 12 months. Mechline will contact you 12 months after your Waste20 has been installed to arrange for more woodchips to be delivered.

Can I put refrigerated or frozen food waste into the Waste20?

No. Please allow for the food waste to come to room temperature before adding. If very cold food waste is added it will change the conditions in the chamber and could kill the microorganisms that break up the food waste.

Is there any sludge or by-product for me to get rid of?

No. All of the organic food waste will be digested by the machine and will run away to drain as grey water. The only items that will need removing from the machine from time to time are non-digestible items that are accidentally put into the machine.

Is there anything else I need to do to keep the Waste20 machine running?

Yes. You must ensure that there is always a box of Waste20 microorganism in the machine and that the box is properly connected. This is essential because every time the machine hatch is opened a tiny amount of the microorganism is sprayed onto the food waste. If the microorganisms are not regularly topped up in this way, they will eventually die out and the machine will not be able to function. If the machine lid is opened approximately 25 times per day, the fluid box will last approximately 30 days. If the lid is opened more frequently, the fluid box will require replacing sooner.

The microorganisms have been specially blended for this application and are perfectly safe. The Material Safety Data Sheet for the microorganisms is included with each master box, and there is a copy in the user’s manual for your records.

When the fluid requires replacing, the blue ‘**REPLACE FLUID**’ light on the control panel will flash and a buzzer alarm will sound. **NOTE:** If the fluid is not replaced within 72 hours of the alarm sounding, the lid will automatically lock, and will not release until the fluid box is replaced. Follow the replacement instructions on the fluid box. Contact Mechline for replacement fluid 01908 261511. Always keep a spare box in stock.

Water connections must be 1/2-in BSP, with permanent (24-hour) warm water supply @ 50°C.

Drain connections must be 42mm (1 1/2-in) at approx 220mm AFFL running trap or discharge to open floor drain (must be drained to foul water line)

Installation must be carried out in accordance with local authority requirements. Water supplies require appropriate back flow prevention.

Minimum recommended wall gap is 90mm to rear of appliance for ideal positioning.

Installation should be in a well ventilated area.

What if the red ‘SERVICE’ light flashes?

The ‘**SERVICE**’ light will flash and the alarm will sound if the machine shaft becomes jammed. If this happens, open the machine lid and remove the cause of the jam. Rubber gloves should be worn for this operation. The machine shaft will not run until the lid has been closed.

What if there is a power cut, or someone turns off the power to the machine, or someone presses the emergency knock-off button?

Waste20 will not automatically restart. Once the power is restored, follow the procedure:

1. Turn the isolator on the front of the machine to the ‘**ON**’ position.
2. Ensure the emergency knock-off switch is pulled out.
3. Press the green ‘**RESTART**’ button on the control panel.

The machine will now restart. **NOTE:** The ‘**WAIT**’ light will illuminate and the lid will remain locked for 20 minutes while the machine warms up. After 20 minutes the machine can be used in the normal way.

What if the machine is left unused for a long period of time?

If the Waste20 machine is not used (lid is not opened) for 96 hours (4 days and nights,) it automatically reverts to ‘**ENERGY-SAVING**’ mode. Opening and closing the lid will return the machine to normal running mode.

NOTE: If the machine is not used (lid is not opened) for 1 month, the microorganisms inside the machine chamber will die. In this situation a ‘**BOOSTER PACK**’ of microorganism must be added to the machine chamber before the machine is used. ‘**Booster packs**’ can be purchased from Mechline 01908 261511.

Appliance care

The machine should be regularly wiped down using a disposable cloth and plain water. Do not use bleach or other harsh cleaning chemicals. Never pour floor washing or cleaning water into the machine as the presence of cleaning agents may kill the microorganisms. Do not turn off the power or water supply to the Waste20. The machine should be left running.

Max Temp of Hot water service? If 60 degrees, will it need a thermostat fitted?

Yes; a thermostatic mixing valve will be required, set to 50 degrees.

Does the unit come fitted with a check valve or will that have to be provided externally?

One must be provided externally.

Will/could the unit freeze up if it is located outside, even if it is under cover?

There is a danger of this. The unit will need to be protected from this, in an enclosed shed or in a loading dock away from the harsher extremes of the weather. Avoid inserting food that is frozen or very cold. It is best to let it come to room temperature.

What protection will be required if it is located outside?

It must be under cover, with sides and front fixed or temporary (i.e., plastic strips, as in factories). It would be better if the structure had some form of thermal insulation so the cold could not work its way through. Consider using a thermal heater to deliver heat if the unit drops to near zero conditions-this is mainly to protect your investment.

If the unit is located in a separate room, what extract rate will be required? Or will an extraction fan be adequate?

It is always worth getting decent ventilation into the area; we have units that have operated with both standard ventilation and just a fan. The aim is to get approximately 15-20 air changes, but some sites are less than this. It is for each site to determine how best to provide working conditions suitable for its operators and employees.

Is all servicing from the front, or will the unit need to be moved out for access to the rear/sides, e.g. to gain access/replace the agitator?

All servicing is to the front. The motor is to the right-hand side, and it is always worth allowing a little room to that side to allow space for any possible service requirement.

Does the unit have to be drained down for maintenance purposes?

No; in fact it does not have a tank or hold any water, with the exception of water latent in the food waste, which would be dispersed before servicing.

What height does the drain outlet have to be and what type of open floor tundish, gulley, etc.?

The drain exit from the machine is around 220-250mm off the ground (dependent of how high the adjustable feet are set to). Ideally the drain is discharged into a trapped floor gully.

Does the room require a wash down gulley?

This is a decision for the client, but it would help to run the drain outlet and a wash down gulley together, giving the ability to wash down the room, especially given that there may be spillages of food waste, etc.

Can all the contents of the tank, e.g. wood chips, etc., be removed through the top hatch?

Yes; this is actually the only way out of the chamber.

What clearance is required around the unit (off the adjacent walls, etc) for access to the service outlets and where does the electrical connection need to be sited?

Clearance to the rear is a minimum of 90mm. Allow at least this to the left-hand side and more to the right-hand side for access to the motor if needed.

How to determine the capacity of waste/number of units required to cater efficiently for the number of covers served in a catering facility?

The calculation is more a rule-of-thumb as each establishment will differ. Usually outline the following: If you use a range of 0.2kgs to 0.4kgs PER COVER, the lower being where you think there is good control, the latter where it is a more expansive menu i.e. more wastage. For example a restaurant does 100 lunches, 50 breakfast and 250 evening meals, with a total of 400-covers, and it is a broad menu, we have $400 \times 0.4\text{kgs} = 160\text{kgs}$ per day. They may then tell you that they have food waste pick ups twice a week at £85 per lift, giving a monthly charge of approximately £680 per month and an annual charge of £8,160.00. Also, consider costs for black bin liners, as operations could spend £30 per month double bagging food waste.

How much water is required per day, each time it is loaded?

600litres is the daily usage. The water usage is pretty consistent over the day; however, there will be a slight increase during operational hours, as this is when the lid is being opened. So if 600litres per day is the maximum draw, it will use about 50litres per hour on average. This will increase slightly during operation and be less than that during the night.



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