

# Waste management Gastronomy



Design, ergonomics,  
hygiene, safety and  
recycling



**ELKUCH GROUP**



“Planning a commercial kitchen means mastering process and logistics planning, especially waste management should be treated intensively.”

## Important influencing factors in waste management design

The processes in the kitchen must be precise: from ordering to dishwashing to disposing of leftovers.

You may not be thinking ahead of how you are going to dispose the waste from the food you are preparing. However, for your kitchen to operate in the most effective way, it is important to think in advance about how you are going to deal with food waste while preparing it.

Elkuch Waste Solutions supports you in the conception and implementation of a hygienic and environmentally compliant operation and its waste management for the gastronomy industry. Our services include:

- Development of solutions and holistic concept
- Support in the creation of HACCP concept
- Preparation and handling of tenders
- Supply and installation of waste management equipment
- Evaluation of concept solutions
- Design and implementation planning
- Planning supervision according to HACCP

**Design.** In order to find the best possible concept, we first work with you to understand the ideas you have for your waste management. Here it is important that you clearly formulate your expectations and provide us with the most relevant information. Then, the financial framework of the construction and the expected business development of your company should be taken into consideration at this point.

**Ergonomics.** An ergonomically well-equipped workplace leads to greater satisfaction and faster acceptance by the workforce. This in turn also leads to fewer errors and less absences, thus greater efficiency.

**Hygiene.** For reasons of hygiene, care must be taken to ensure a strict separation between the "clean" and "unclean" areas. Nevertheless it is important, for example, that kitchen staff can quickly hand out food to service staff, and that used dishes and leftovers are returned to the sink just as quickly.

**Safety.** When properly disposed, food waste should not cause any food safety hazards. However, if it is not removed from food preparation areas as quickly as possible, it is likely to attract pests. In addition, spillages that aren't cleared right away, pose a danger for slipping for employees. Improperly stored waste compromise hygiene and cleanliness of your kitchen, this can seriously impact your overall rating and company reputation, not to mention the health of your customers and employees.

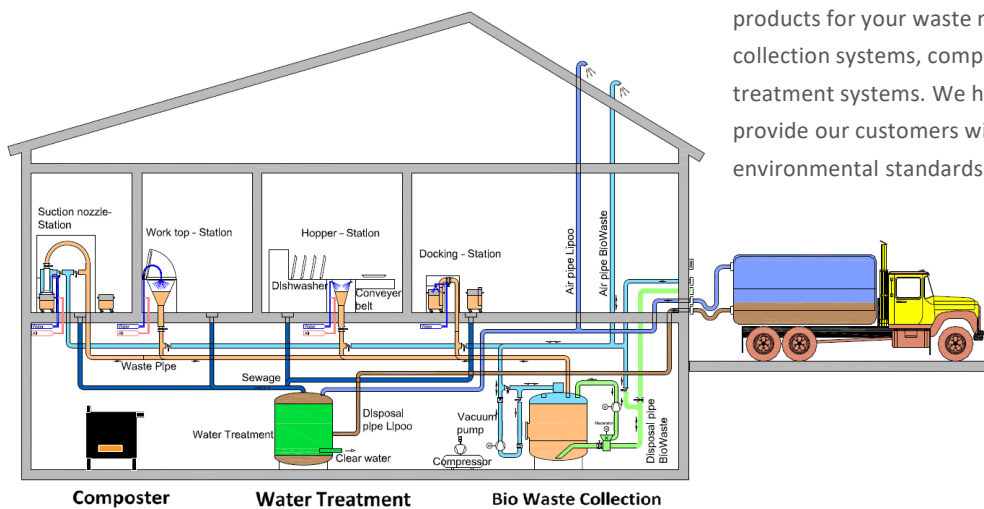
**Recycling.** Since July 2011, for hygienic reasons, commercial food waste may no longer be fed to animals. It should be used for energy and material purposes instead. Biogas plants appreciate the high-quality biomass, free of foreign substances, in liquid form, easy to handle, coming out from the Elkuch deposit tank, as a co-substrate in the fermentation process.



## Customized solutions: more efficiency – better hygiene

In traditional process, multiple waste bins are used for waste handling then stored in cooled and ventilated rooms. Sometimes happens that garbage bins are overfilled and tip over. Worst case!

Elkuch Waste Solutions builds customized, high-capacity products of superior functionality for more efficiency and better hygiene. With professional know how, ISO 9001:2000-certificated business areas and a team of experienced specialists, we are able to meet the customer needs in the best possible way.



**Functionality.** Elkuch Waste Solutions offers tailor-made products for your waste management concept: automatic collection systems, composters and waste water treatment systems. We have high quality products to provide our customers with the best hygiene and environmental standards.



**Biogas plant.** Organic waste and grease separator content are collected on fixed intervals by a suction truck and then taken to the biogas plant where they are treated at 70°C in a bio digester. After an anaerobic process, 1 m<sup>3</sup> of organic waste turns into 140 m<sup>3</sup> of biogas. Biogas is a mixture of methane and carbon dioxide, the first of which can be combusted to produce green renewable energy. The residues after digestion are used in agriculture as fertiliser and soil conditioner.



Design  
Support  
Engineering  
Manufacturing  
Assembly  
Maintenance

## Automatic bio waste collection systems

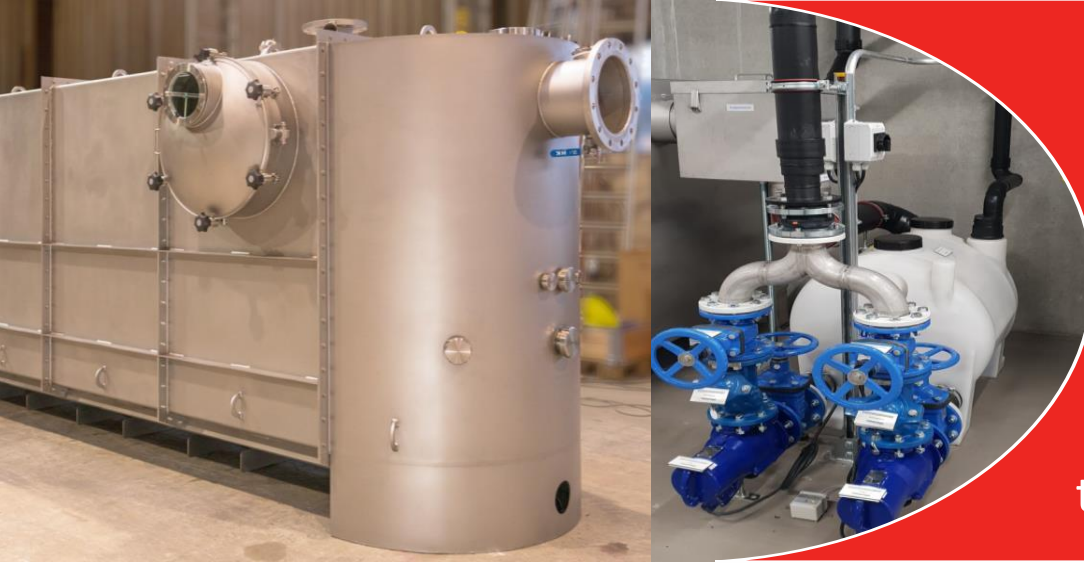
Annoying waste odours, garbage bins laying around the "clean area" and washing of containers are a thing of the past: Food waste is extracted where it is generated. The internal transport of the food waste in kitchens of buildings is completely eliminated.

**Automatic waste inlet.** The food waste goes straight into the fix feeding stations and is sucked with vacuum to the main storage tank through the waste pipes system. The integration of fix inlet stations into the kitchen layout and the optimal design avoid corners where dirt can accumulate. The inlets can be equipped with cleaning devices and thermal disinfection.

As an alternative, you can choose our mobile bins and waste inlet "Docking Station". Our mobile system ensures a fast waste handling and reduces the amount of fix inlets to a minimum, saving costs.



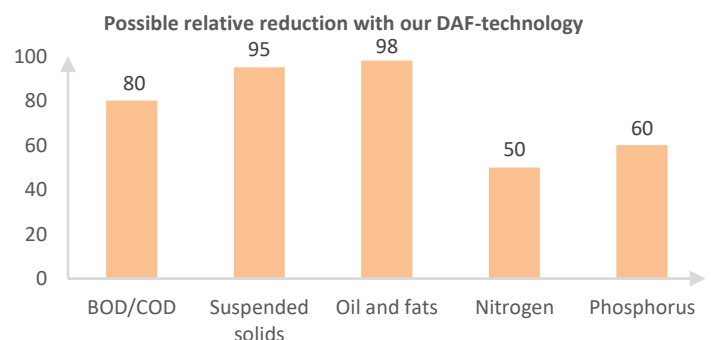
**Collection central.** The kitchen bio waste is collected, crushed and stored in a hermetically closed tank. No odours arise inside the building due to the permanently vacuum in the pipe system. The filtered exhaled air is routed over the roof. The plant technology is operated with a SPS central control system. The inlet stations are connected to the central control system via a bus system. The operation is fully automated.



## Waste water treatment equipment

Today, increasingly grease levels in waste water is causing clogging problems in the sewerage systems. Trying to find solutions to this problem, the authorities of many cities are setting limits for evacuated low-volatile lipophilic emissions observed in the gastronomy industry. The use of further purification stages such as biology or dissolved air flotation behind the grease separators, it's becoming necessary and soon mandatory.

**Grey waste water.** Elkuch Waste Solutions offers its own products for grey waste water treatment. Our single unit system "Lipoo-Hydronetik" treats the kitchen waste water according to the regulations and enables the intermediate storage of waste materials until they are discharged.



**Dissolved Air Flotation.** Impressively efficient, is a 3-stage process where the grease water is fed directly into the tank and treated without flocculants. The newly integrated dissolved air flotation system retains the emulsions at the bottom of the tank until they are disposed. Treated water is redirected to the sewage system.

Since water content is constantly reduced during the process, water disposal costs are reduced and better efficiency is reached for biogas production. Odor neutralization or lifting units can be installed additionally.



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