

RENSA

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RENSA

Your innovative partner in grease and food separation technology.



FIRSTLY

THANK YOU

FOR CONSIDERING US!



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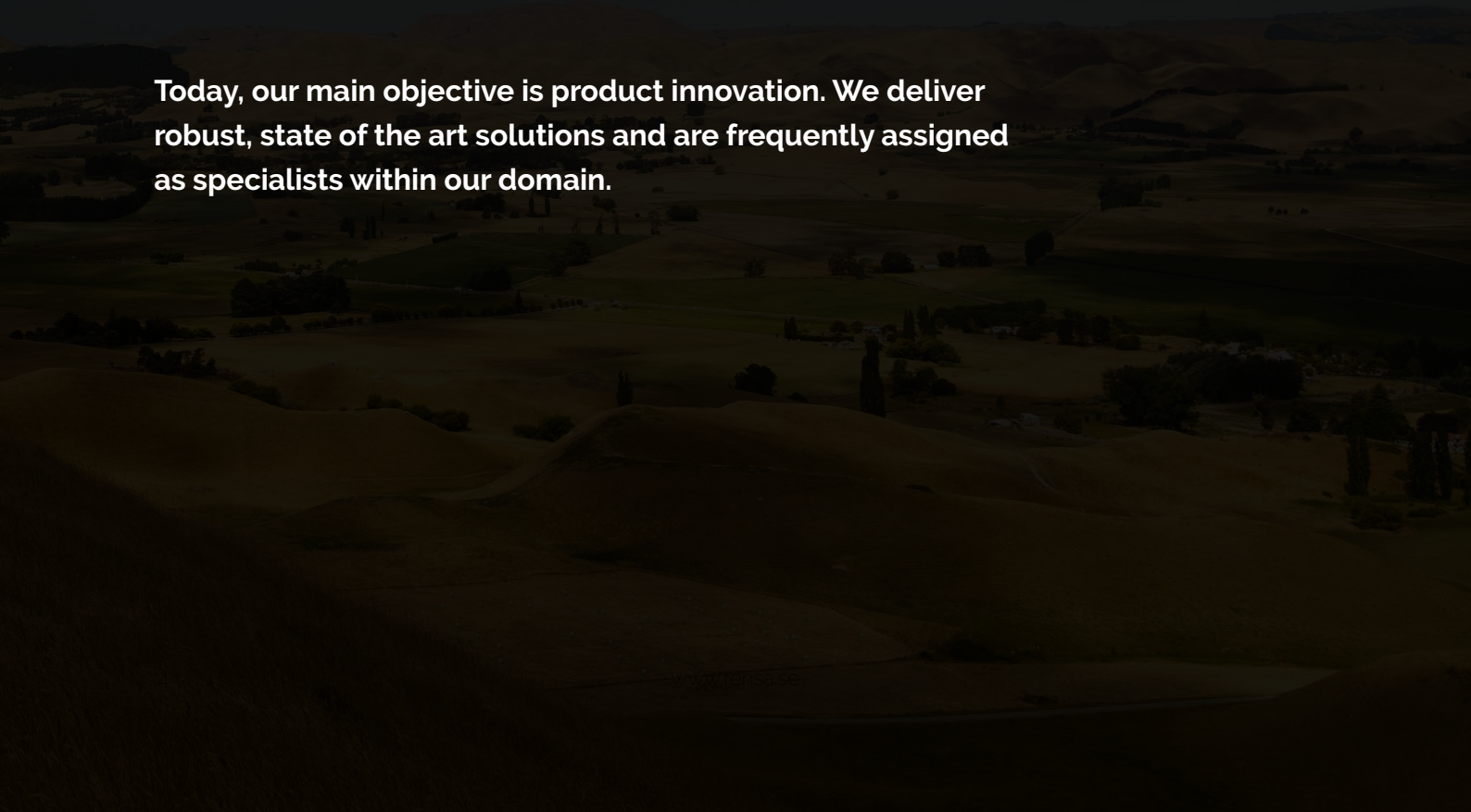
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WE CREATE

INNOVATIONS

Today, our main objective is product innovation. We deliver robust, state of the art solutions and are frequently assigned as specialists within our domain.



1

OUR STORY

... SO FAR

Rensa Avskiljarteknik AB, develops and manufactures systems for purifying wastewater and for collecting food waste from businesses and households.

The organization was once a traditional plumbing company that developed into a one-stop-shop, delivering everything from installation to maintenance and development of food/grease separation systems. Our history is significant as it characterizes all the work we do today. Our solutions and the adaptations created for specific projects, are all derived from an extensive experience from the field; so, everything that meets the drawing board, stems from hands on experience.

Today, our main objective is product innovation. We deliver robust, state of the art solutions and are frequently assigned as specialists within our domain. Our clients range from municipalities to the private sector and we keep a close dialogue with both the consultants during planning and the contractors during execution.

We are a privately held company and development and design is an ongoing process, financed through generated earnings.

Our ambition is to be the leading company and the obvious partner and supplier when it comes to managing food waste and wastewater. Needless to say; we work very hard to deserve that position. We are involved in several interesting pilot projects and are always keen on meeting new markets and challenges. We assist our clients from the drawing board to a finished operational plant.

Today, we deliver a wide range of solutions:

- Grease separators for purifying wastewater from businesses and households.
- Food waste systems for collecting food waste from businesses and households.
- Combined grease separators/food-waste systems for businesses and households.
- Technical accessories for our range of systems solutions. Including pumping stations, emptying stations etc.
- Disposers for both the private and commercial sector.
- Designing and manufacturing client/project specific solutions.

We have installed and delivered over a thousand systems throughout the years. In addition, we also work close and keep a dialog with municipalities and commercial actors across Sweden to educate and exchange experiences and knowledge. The potential in biogas production is getting increasingly recognized as one of the remedies to the environmental challenges that the future holds, and we are happy to be a part of the solution.

30 years of innovation



QUALITY POLICY

Rensa Avskiljarteknik
AB is ISO 9001
certified.



ENVIRONMENTAL POLICY

Our products have a
positive impact on our
environment.



BUSINESS CONCEPT

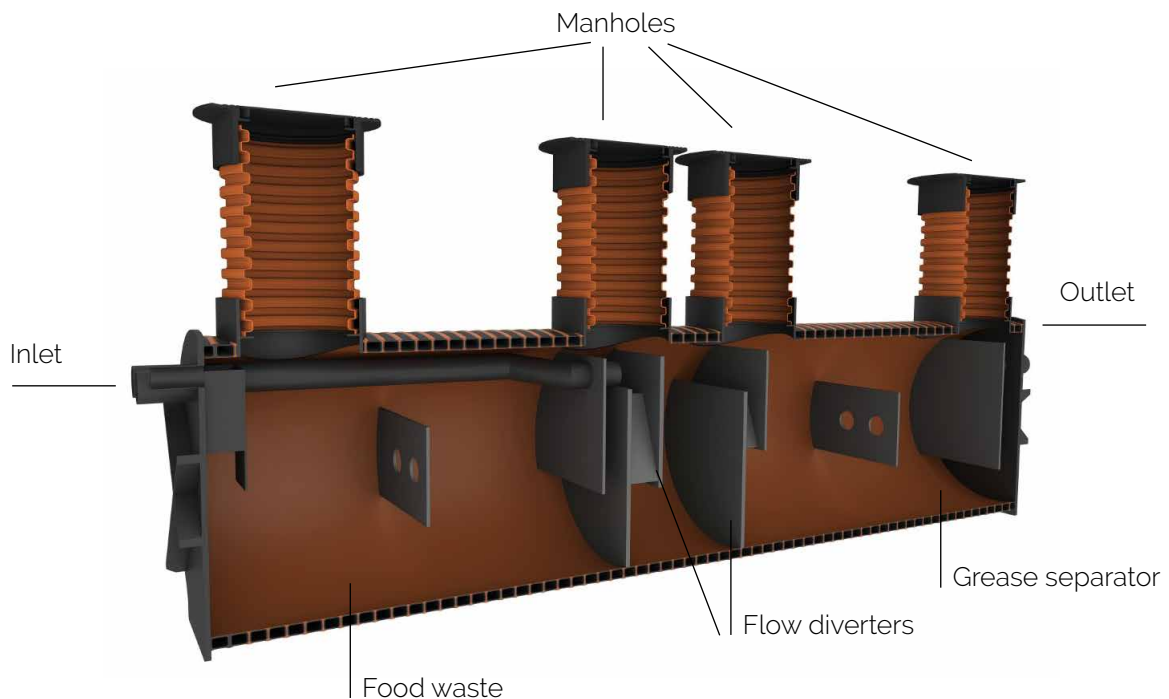
We deliver customized
solutions and keep
what we promise.



2

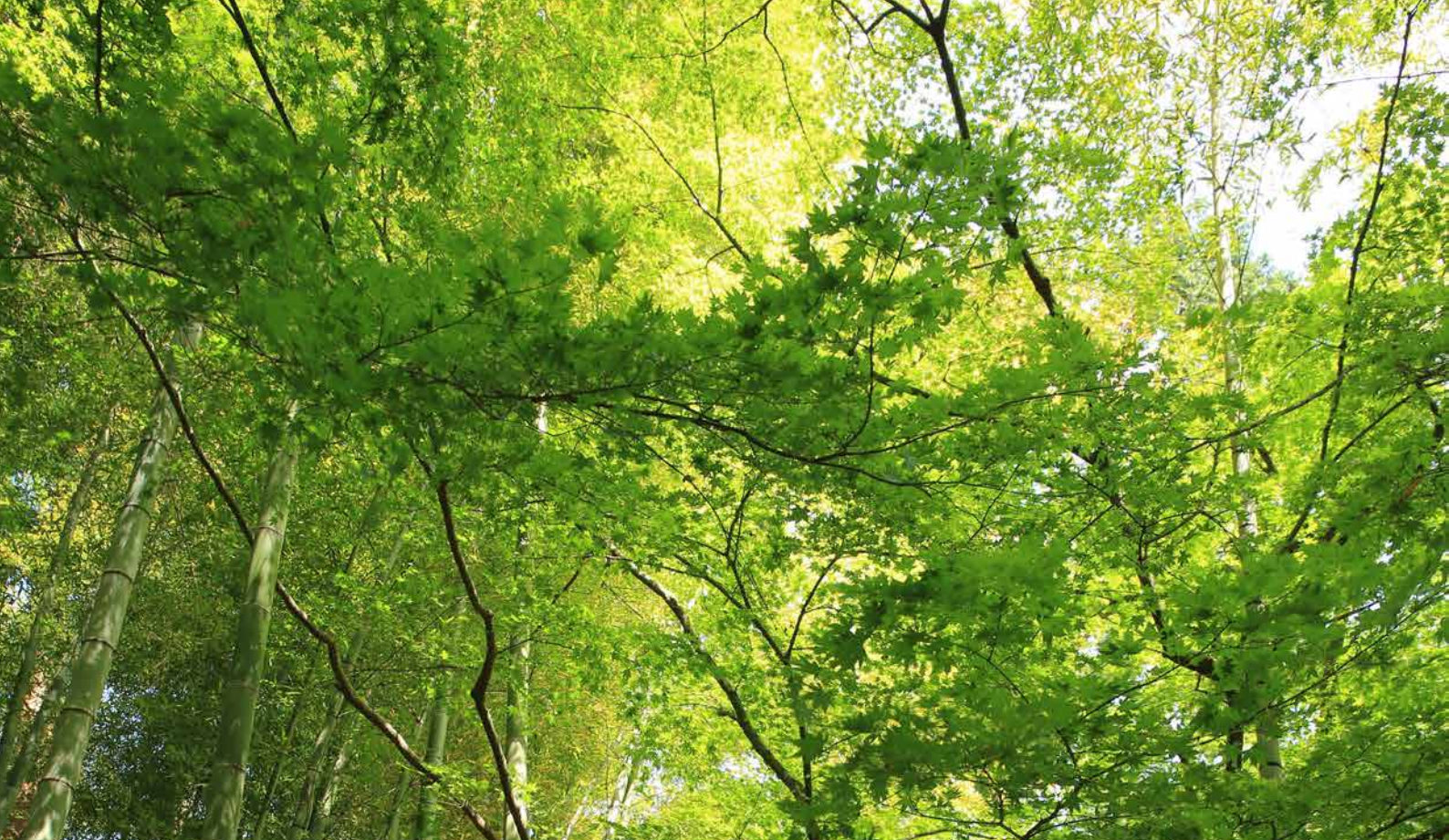
COMBINED FOOD/ GREASE SEPARATOR

The combined food waste/grease separator works with gravimetric principles and contains no moving parts.



The basic idea is that you treat food waste in the same way you handle grease. A separate inlet from the disposer/s leads the food waste to the first chamber of the tank. Surplus water spills over to the second chamber, the grease separator. The second inlet is connected to the rest of the waste water coming from the kitchen and it by-passes the first chamber in order to not contaminate the food waste.

- Robust and strong structure. Guarantees function over time.
- Flexible, dimensioned and adapted to the specific project.
- No moving parts.
- Built and certified in accordance with European standards.
- Certified to meet existing regulation concerning grease/sludge emissions.



We believe that by simplifying the waste management for the end user and by lowering the costs for transportation, the value of biogas and biomaterial will be optimized and result in higher payoffs.



3 | ADVANTAGES

The benefits of mechanical separation of food waste is twofold. By making the separation of food waste more convenient for the end user, the propensity to separate food waste increases.

It not only becomes easier than carrying wet food waste in bags and bins, but also improves the overall work environment in the kitchen and makes it more hygienic.



Moreover, it reduces environmental costs of transportation. By handling food waste in the same way, and at the same time as grease, we can completely rationalize the transportation of food waste.

We believe that by simplifying the waste management for the end user and by lowering the costs for transportation, the value of biogas and biomaterial will be optimized and result in higher payoffs.

Application for both commercial kitchens and residential projects.

The principle for sorting food waste mechanically, was originally applied in commercial kitchens e.g. in schools, restaurants and hotels etc. In recent years however, the technique has been adapted to residential projects. We see this as strong indicators of it becoming more wide spread and as a distinct proof of concept.

4

FOR THE COMMERCIAL MARKET

A simple and efficient way for handling food waste in commercial kitchens, such as restaurants, hotels and schools etc.

The principle idea is a central food waste/grease separator installed in the ground or in a space set below ground level. Food waste disposers are installed in the commercial kitchens in restaurants,

hotels and schools etc. Separate pipes enable the food waste to run separately from the "grey water" (water containing grease from e.g. dishwashing machines).



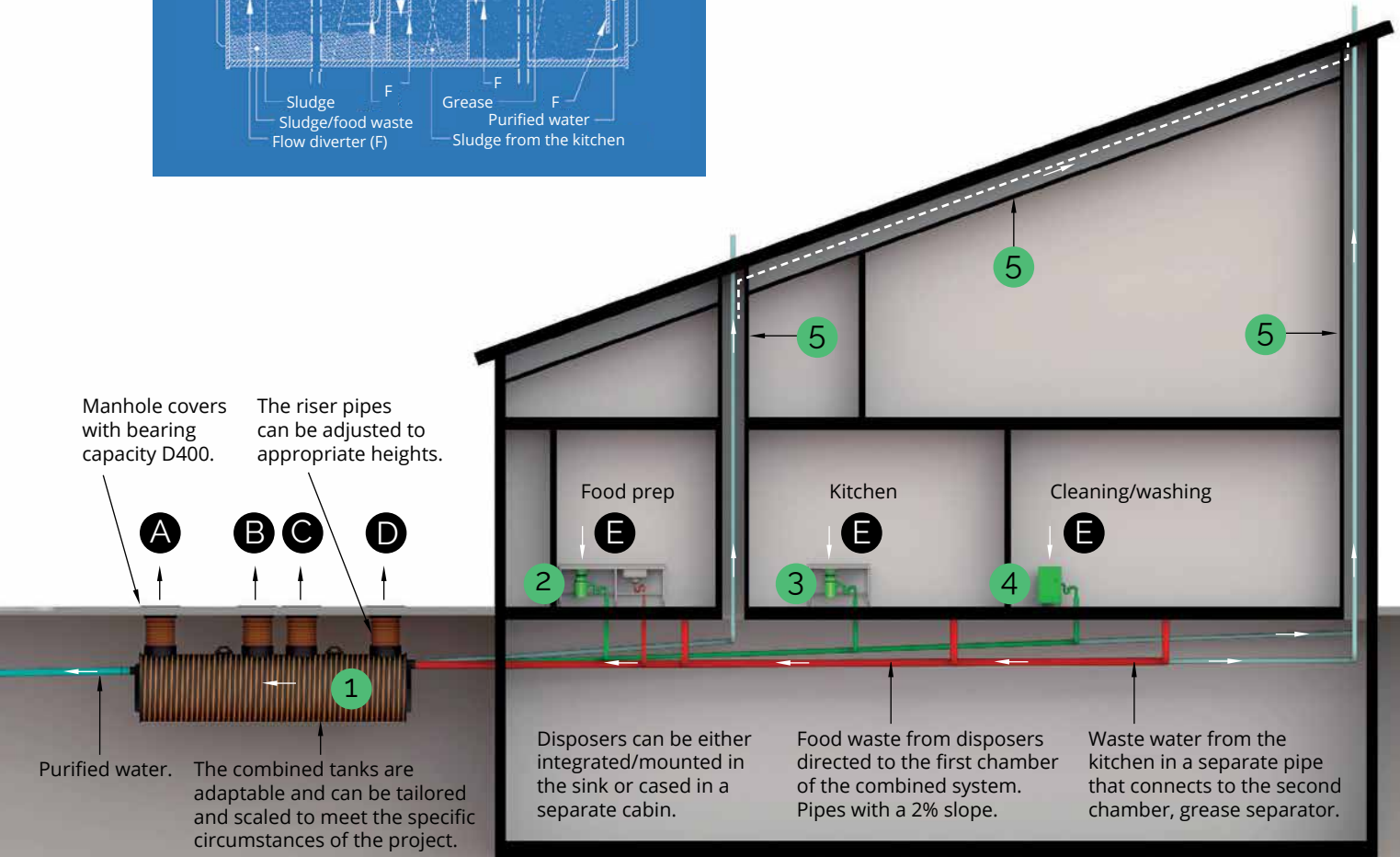
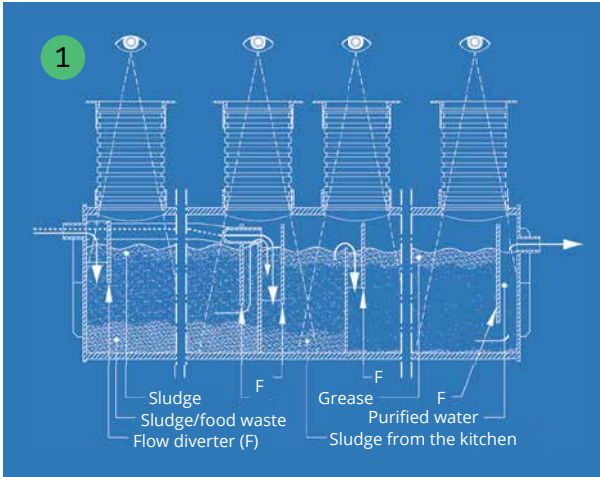
The food waste is designated to the first chamber of the tank (see cross section on page 7). The surplus water from the disposers is separated from the food waste and directed to the second chamber. Here it meets the grey water in a traditional, gravimetric grease separator. The grey water is connected to a separate inlet and bypasses the food waste and is directed directly to the second chamber.

Article in VVS Forum

Rensa delivered a customized food waste system to one of Sweden's biggest hospitals.



Technical description



- A** Emptying points grease separator
- B** Emptying points grease separator
- C** Emptying points food waste
- D** Emptying points food waste
- E** Food waste

- 1** Combined system for grease and food waste separation
- 2** Disposer integrated in sink
- 3** Disposer integrated in sink
- 4** Disposer separate cabin
- 5** Venting

5

FOR RESIDENTIAL BUILDINGS

Rensa's concept building - the possibilities and synergies of mechanical systems.

The concept building summarizes a handful of our solutions and products. And shows the application for residential areas. The principle is the same as for commercial applications. In the example on the next page, the system is serving both the households and the commercial facilities in a cluster/neighbourhood.

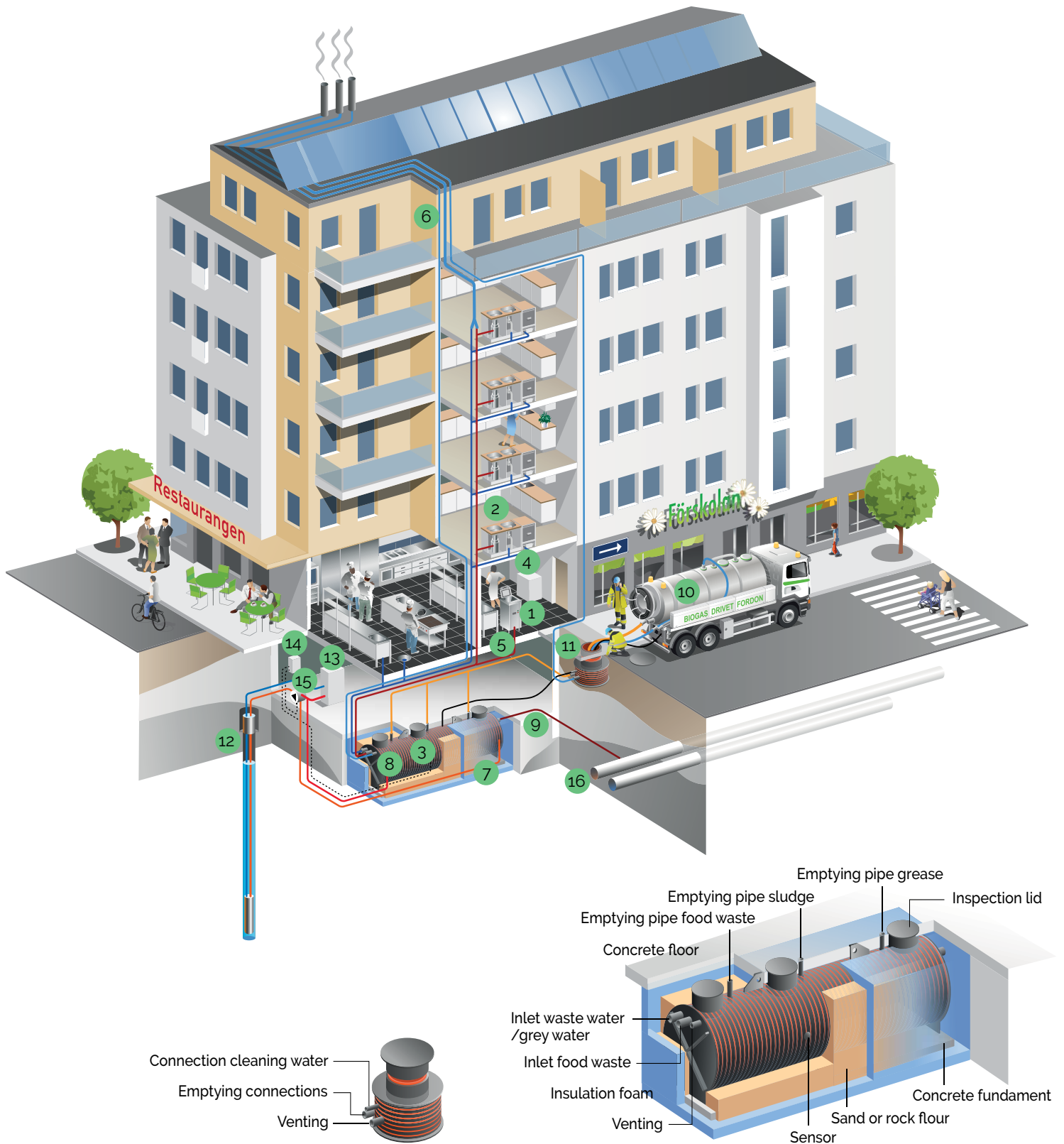
Food waste disposers are installed in both the household kitchens and in the commercial kitchens/restaurants etc. Separate pipes enable the food waste to run separately from the "grey water" (water containing grease from e.g. dishwashing machines). The food waste is designated to the first chamber of the tank. The surplus water from the disposers is separated from the food waste and directed to the second

chamber. Here it meets the grey water in a traditional, gravimetric grease separator.

The two fractions can then be collected with the same vacuum truck and delivered to a refinery as potential material for biogas and digestate production. The systems are dimensioned in accordance to European standards and hence constructed to be emptied monthly. As the food waste has already been grinded it doesn't have to be prepared before hygienization at the receiving plant.

Compared to handling food waste in bags and designated bins, our solution drastically improves logistics and lowers transportation as well as it increases the propensity to sort biological material.





1. Commercial disposers
2. Residential Disposers
3. Combined tank – food waste and grease separation.
4. Waste water from kitchens and dishwashers - households.
5. Food waste from commercial facilities and households.
6. Venting/joint or separate.
7. Heat recycling - Inlet.
8. Heat recycling – Outlet.
9. Outlet.

10. Vacuum suction truck.
11. In ground emptying station with built-in exhaust air from vacuum truck above ceiling.
12. Geothermal heat/energy well.
13. Heat pump.
14. Control cabinet.
15. Circulation pump.
16. The public sewer network.

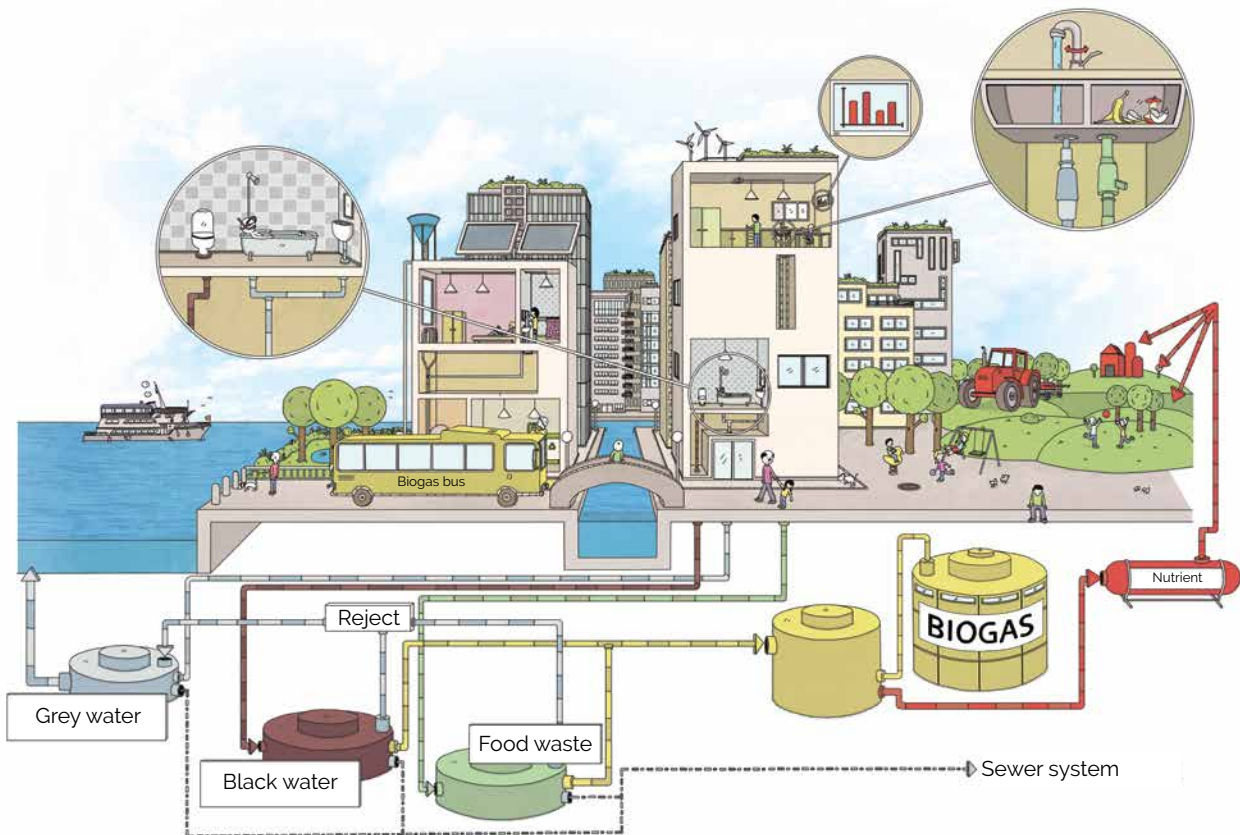
6 | CASES

Two exiting projects in Malmö and Helsingborg in Sweden showing applications in residential areas.

Sorgenfri Malmö, Sweden

In Sorgenfri we delivered a system that will serve 900 households divided between a dozen blocks. It will handle both the food waste and grease from several blocks of residential housing. The system will be emptied once a month from one central location instead of weekly from 14 different waste centrals.





Oceanhamnen, H+ Helsingborg, Sweden

We're involved in a lot of interesting and ground-breaking pilot projects in Sweden. Amongst others Oceanhamnen, aka H+, in Helsingborg, deserves a special mentioning. Here food waste will be transported directly to a nearby plant through pressure lines and underground infrastructure. Alongside food waste, the plant will also handle black and grey water. A part of the extracted energy will be sent back to the residential area for powering evening lights amongst other things. A great example of how you can build circular and sustainable "islands" outside of the existing grid.

We tailored-made pumping station for the first stage. When complete, the system will serve 5,000 households.



7 | CONTACT

If you would like to investigate the possibility of applying mechanical food waste systems in your project, we're just a phone call away.

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