



Oil separators

Grease separators

Settling tanks



# Grease Separators



Grease separators are used to treat wastewater contaminated with fats and organic oils produced by the food industry and catering companies.

On the basis of PN-EN 1825 standard, fats and oils of organic origin are vegetable and animal fats and oils, insoluble or slightly soluble in water, with a tendency to saponification

EST grease separators are designed for treating wastewater with hydraulic flow of 1 m<sup>3</sup>/s to 25 m<sup>3</sup>/s.

## Application



restaurants, pubs



canteens, caterers



food processing plants

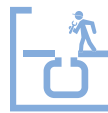


slaughterhouses, abattoirs, butchers, dairies

## Advantages



simple construction

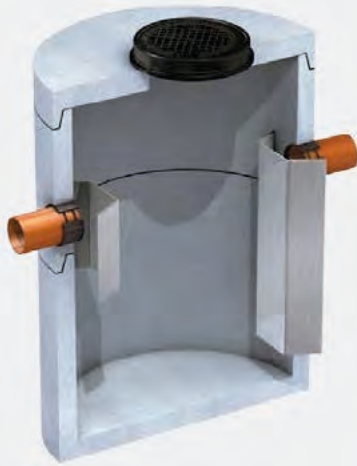


Easy maintenance from terrain level



possibility of installation in carriageway areas





grease separator EST



## High-efficiency grease separator EST and High-efficiency grease separator with settling tank EST-H

### TYPES

Introduction of fat into sewage systems causes a number of operational problems and has a negative impact on the operation of sewage treatment plants. These problems result from the fact that fat is not soluble in water, but is found in the form of sticky lumps that are difficult to decompose. EST grease separators are used to separate fats from wastewater during the flotation process.

If wastewater flowing into the grease separator contains a high concentration of suspended solids, it must first be cleaned in a settling tank. The design of the settling tank depends on the location conditions, type of sewage to be treated, flows and expected amount of suspended solids in the incoming sewage. Settling tank may be independent or integrated with the EST-H grease separator.

### CONSTRUCTION

Grease separators feature a watertight chamber, made of pre-fabricated concrete and reinforced concrete elements. Operational access to the device is provided by a manhole cover. Depending on the location of the settling tank, cast-iron or cast-iron-concrete manholes of load classes A15, B125, C250 are used, and in case of location in the carriageway area, a heavy type D400 manhole is required. Thanks to the high chemical resistance of concrete, meeting the requirements of PN-EN 858-1:2005/A1:2007 and PN-EN 1825-1:2007, no internal coating is necessary.

Tight passages are used to connect inlet and outlet channels. The inlet and outlet are normally located in the axis of the separator. In most devices, it is possible to adjust the inlet and outlet axes (details in the data sheets), as well as to connect several inlets. In order to reduce operating costs and improve ecological safety, it is possible to connect an alarm system equipped with an oil level and overflow sensor to the separator. Continuous monitoring of the device's operation minimizes the need for local supervision of facilities and shortens the response time of technical teams in case of failure.



## INSTALLATION

Separator should be fed with gravitational flow. To avoid accumulation of grease, inlet pipes should be laid with a drop of at least 2%. Pumping station should be located below the water treatment facilities.

No domestic sewage, rainwater or sewage containing hydrocarbons should be discharged into the grease separator.

Separator must be located in such a way as to ensure convenient access of equipment for removal of accumulated waste and to allow for execution of maintenance operations.

## OPERATION

Operation of the separators involves regular inspecting and cleaning of the devices. Frequency of cleaning depends on the amount of incoming sewage and its content (fat concentration and suspended solids). Recommended frequency of inspection and removal of sediments is once every two weeks.

Inspecting the separators includes:

- visual assessment of the technical condition of the components,
- checking the amount of accumulated fat and sludge layer (also in devices without sedimentary sections).

Day-to-day operation does not require entering the tanks - it can be carried out from the ground level. Removal of accumulated waste should be carried out by a licensed company with appropriate equipment for collection, transport and disposal of waste and with the appropriate permits.