

Grease traps and interceptors

What are they?

Grease traps are used primarily in mechanical workshops and food industry kitchens. Their function is always the same: to remove solids and fats, oils and greases (FOG) from liquid effluent streams.

A typical grease trap has three parts:

1. A solid particle interceptor – also known as a sludge catcher;
2. A grease/fat interceptor – called the ‘stilling tank’ where FOG in dirty water is prevented from rising to the surface; and
3. A small sampling chamber – where the improved quality of the cleaned effluent can be observed.

Grease traps are rated on their flow performance. For example:

- Small users such as households and sandwich bars will use traps rated at 1.5lt per second;
- Medium-sized restaurants and food production lines often use traps rated at 4.5lt per second; and
- Food courts, dairies, cheese factories, etc. will use a trap rated at 11lt per second.

How grease traps work

The aim of a grease trap is to improve the discharge quality of the effluent prior to it entering the municipal sewer, and to allow an operator to remove solids and grease from the effluent stream with ease.

Well designed grease traps usually have three chambers. The first chamber is equipped with perforated solids retention baskets into which the inflowing effluent arrives. The second chamber, between two baffles, slows the liquid permitting the oils to float to the surface (since oil floats on water) where microorganisms - both latent and added - degrade the floating scum from the underside, improving the quality of the effluent. When there is excessive fat in the effluent a scum will form and is liable to steadily thicken with the increased daily volumes. This fat scum should be removed carefully to avoid dripping and discarded in an approved fashion (BIO-SYSTEMS can provide an established protocol for this task). The third chamber is narrow and allows for visual inspection and sampling.

In many cases grease traps receive effluent from both floor drains and sinks. Dirty water flows through the particle interceptor (perforated sieve baskets) where small solids such as metal swarf, scraps of meat and vegetable solids are caught in the chamber baskets – these should be emptied into disposal bags twice a day before the rubbish putrefies and becomes unpleasant to handle. The grease interceptor trap should be situated sufficiently far away (down-line) from the under sink particle interceptor to allow the temperature of the dirty water to drop to below 40°C, preventing the biomass of bacteria in the stilling tank from being damaged.

Common grease trap problems

Oil overload is a frequent problem plaguing industrial grease traps. Modern fuels, lubricants and catering oils are highly complex compounds and pose even more of a problem because they are difficult to degrade and take a long time to break down. The result? Congested, slimy drain pipes and sulphurous, foul odours. This is also true of effluent in the food and catering industry where modern 'trans fats' often accumulate and cause blockages unless dealt with correctly and timeously.

OdorCure Professional Greasetrap Maintenance Programme

Odorcure (Pty) Ltd has a Greasetrap maintenance division that specializes only in the installation and maintenance of greasetraps throughout Gauteng.

We are well equipped and experienced to deliver the service that we offer.

Locally, our customer base includes FNB-Fairlands, MonteCasino, Michaelangelo Towers, MTN Head Office, Standard Bank GLC and Eskom to name a few.

HLS ECOLO's odour control technology is based on the atomization of variations of a proprietary formulation sold under the airSolution® name. A number of airSolution® blends have been formulated to deal with a wide spectrum of industrial odours. All variations of airSolution® are non-hazardous, non-toxic, CFC-free and ozone friendly. Material safety data sheets are available on request.

The product that will be dosed into the drains are known as **Ecolo greasEater**. The product has been designed primarily with the objective of breaking down grease, fat and other complex organic materials as well as neutralizing odours.

This product proved to be the most effective treatment for fat and greasetraps.

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