

Grease Guardian FAQs

1. What's the difference between a Grease Guardian and a grease trap?

Both are mechanisms for removing fats, oils and grease (FOGs) from contaminated waste water to:

- prevent them from solidifying in downstream sewers to cause blockages and
- to reduce the level of treatment required at water-treatment plants to break down the FOGs.

A grease trap (grease pit, grease interceptor, grease arrestor) is the term applied to a large, usually below-ground pit into which waste water flows from kitchens and similar facilities. It is the preferred device in most Water Authority areas because it contains no working mechanisms and is therefore perceived as reliable. The minimum size requirement in most areas is for a volume of at least 1000 litres.

A grease trap has usually two vertical baffles under which the waste water must pass. The baffles create a chamber in the middle where the lighter FOGs will separate and float on top of the water. Excess, cleaner water flows from the outlet of the grease trap to sewer. Because the water passes under the baffles and under the layer of FOGs, these grease traps are often described as "under-flow" units.

Every so often, as dictated by the local Water Authority, the grease trap has to be pumped out by a certified contractor who will generally aim to recover the FOGs for sale to renderers. The frequency of pump out is somewhat arbitrary, variable to some degree by the type of business where the grease trap is located. There is no supervision of the performance of the grease trap between pump-outs because they are generally buried. In other words, there are no tests required to verify if the grease trap has exceeded its FOG capacity and is allowing FOGs to pass downstream.

Grease traps do not typically have solids screening devices and so it is normal for a layer of solids to gradually build up in the bottom of the pit, reducing the effective capacity for the settling of the water and FOG mixture. The pump-out contractor does not like to have these solids contaminating the mixture and it is common that this layer is left behind to be further built upon. Some of the faults that can attach to grease traps include:

- Erosion of the structure (usually concrete) by acidic FOGs leading to fractures and leaking
- Emission of foul odours
- Blockages by congealed FOGs, especially during cold weather
- Attraction to vermin

2. When should a Grease Guardian be installed?

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Some businesses are operating without grease traps. Some are operating with older installations which may have only 600 litres capacity. These businesses are required (to differing degrees depending on the individual Water Authority) to upgrade their grease interception facilities. Those businesses may be faced with one or more of the following difficulties:

- The civil works involved in building a new or bigger grease trap cannot be carried out while the business is operating. (Loss of income)
- The building may not have the space necessary for a minimum 1000 litre grease trap without sacrificing other functions such as car parking
- The building may not grant suitable access for the pump-out process
- The building's owner (as opposed to the business operator) may not be willing to allow the civil works to be carried out
- The building may be the subject of an historical preservation order
- The business operator may raise objections to paying for a permanent facility to be added to a building he or she is only renting
- The cost of the civil works may be exorbitant relative to the actual or potential income of the business

3. What are the benefits of a Grease Guardian?

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Grease Guardian is a compact, above-ground device whose performance can be monitored by the hour and which never needs to be pumped out. Its FOG separation efficiency has been measured in a variety of circumstances as 96-97%

Grease Guardian is an under-flow device, having baffles and a chamber in much the same arrangement as in a grease trap. However, it also has an active skimming device which daily removes the FOGs from the system and transfers them to a convenient, hand-carried container. Because it does not need to accommodate the accumulated FOGs for several weeks between pump-outs, Grease Guardian's tank capacity is less than 40 litres!

Grease Guardian is manufactured in AISI304 stainless steel and is therefore extremely hygienic. It is available with IP66 rating which means that it can be washed down by water jets.

Grease Guardian does have a working mechanism but, typically, this operates for only one hour per day and is so simple that it is not prone to breakdowns. However, if there should be a failure and the unit fails to operate when programmed it gives a visible and an audible signal to the operator of the business. It then continues to operate as static FOG separator until a service technician repairs the problem so that the captured FOGs can then be skimmed off.

Cold weather is not a problem for Grease Guardian. Each unit is equipped with a small, programmable electric heater which is set according to the conditions of each location to keep the FOGs from solidifying and causing blockages.

Grease Guardian has an in-built solids screening basket to prevent the build up of solids in the base of the tank. The basket is easily emptied, a recommended daily procedure.

Grease Guardian is delivered in a box and is easily installed by a Plumber, typically under a sink or within the support stand of a combi oven. It requires no water supply and it operates on single phase electrical power.

Grease Guardian may be purchased or leased by the operator as an asset of their business and can be depreciated appropriately against tax. It can also therefore be sold as an asset with the business or if the business relocates, the Grease Guardian goes with it.

4. How much does a Grease Guardian cost?

Grease Guardian pricing starts at less than \$5,500 plus GST whereas it is not uncommon for the installation of a grease trap to cost \$20,000 or more.

5. What is the best choice for my business?

Well, your local Water Authority will tell you that they prefer you to have an appropriately sized grease trap. However, they will listen to genuine argumentation if it is impossible or overly-expensive to install one:

- If an existing grease trap is too small and is impossible or costly to enlarge it, they may consider allowing you to install a Grease Guardian upstream of the grease trap to augment its capacity
- If there is no grease trap and one cannot be installed because of space or access issues, they may consider allowing you to install a Grease Guardian as a stand-alone solution
- Certain businesses, such as those that barbecue whole chickens in bulk are required by some Water Authorities to install a grease separator upstream from the grease trap – an ideal application for Grease Guardian

6. What should I do next?

Eco Guardians has many years of experience in this field and shares with Water Authorities their goal of cleaning up our waterways by dealing with trade waste issues at source. We invite you to discuss your needs with us so that we can work with you and your local Water Authority to ensure that your business acquires an effective, economical and environmentally sustainable solution to its waste water treatment.

CONTACT US ON 1300 55 66 28 OR AT info@ecoguardians.com.au

