

ENDURA® GREASE INTERCEPTOR

OPERATION MANUAL

Train your employees so they can contribute to your goal of responsible waste management and reduced maintenance cost. Provide training in:

- proper function, operation and maintenance of grease interceptors
- proper storage, handling and disposal of wastes
- proper separation and storage of materials
- proper use and handling of cleaning aids
- proper housekeeping
- the benefits of following the code and the Best Management Practices for food sector facilities.

Monitoring Grease and Solids Collected

Using a piece of clear 3/4" (20 mm) diameter tubing, insert the tubing into the trap until it bottoms out. Place your thumb over the top opening, creating a vacuum that enables you to extract a cross section of the total liquid depth. Definite levels of solids, water and grease will be visible.

Cleaning & Maintenance

All grease interceptors must be cleaned regularly to maintain efficient operation. The frequency of grease removal is dependent upon a

variety of factors; the type of food served, the capacity of the grease interceptor and the quantity of grease in the water. Increasing the frequency of cleaning will reduce odour problems associated with grease traps and improve retention efficiency.

The maximum depth of solids permitted to accumulate at the bottom of the trap should not exceed 1" (25 mm).

The maximum depth of grease allowed to accumulate prior to servicing shall not represent more than 25% of the liquid volume of the grease interceptor or 2 1/2" (63 mm) deep on the 15/20/25 GPM (.94/1.26/1.60 Liters per Second - LPS) and 3" (76 mm) deep on 35/50 GPM (2.2/3.2 LPS).

Grease weighs about 7 pounds(3.17 kg.) per gallon. If it is determined that a 20 GPM

(1.26 LPS) 40 lbs (18 kg.) interceptor

accumulates about 5 gallons (19 liters) of grease every four days it would be easily and correctly assumed that the interceptor must be cleaned no less than once a week. Once an optimal grease removal interval has been established for a specific installation, regular cleaning at this interval is necessary to maintain the rated efficiency of the trap. After the accumulated grease and waste material has been removed, the interceptor should be thoroughly checked to determine that the inlet, outlet and air relief bypass port are clear of obstructions.

The interior cavity of the grease interceptor and baffles can be cleaned using standard soaps and detergents.

Some municipalities require cleaning logs be maintained and kept for a minimum of 2 years. A sample of a form has been enclosed.

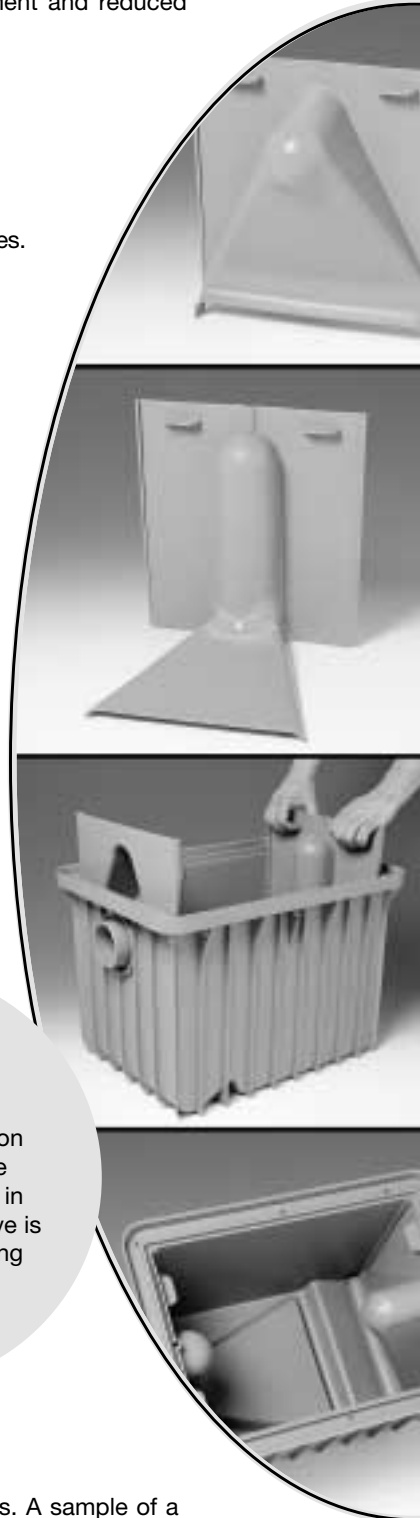
!!!WARNING!!! The use of certain cleaning agents such as chlorine, strong caustics, bleaches etc. in a concentrated solution can attack surfaces and void the unit's warranty.

!!!Caution!!!

Failure to maintain the Grease Interceptor can result in heavy fines from the local authority having jurisdiction and/or flooding as a result of the system backing up.

!!!Caution!!!

If there is an obstruction in the line, make sure the plugs are installed in the sinks or the ball valve is closed before accessing the waste piping.



Recommended Best Management Practices for Wastewater^①

Owners and operators of food sector establishments are encouraged to implement the following Best Management Practices to help improve the quality of wastewater discharged to drains and sewers. Please check with your municipal plumbing code or wastewater department policies to determine conformance criteria for the proper handling of wastewater.

1. Put signs in the kitchen, and especially over the sink, telling staff what can and what cannot go down the drains.
2. Do not pour oil, grease or large amounts of oily liquids such as gravies, sauces or salad dressings down the drain. Collect this material in a secure waste-grease container for subsequent disposal at approved locations.
3. Scrape off greasy trays and pans into a waste-grease container before putting them into a sink or dishwasher.
4. Scrape food waste from pots, pans and dishes into a garbage bin before putting them into a sink or dishwasher.
5. Put a fine basket strainer in sink drains to catch solids as well as dishwasher discharge to catch items such as rice and corn.
6. **Recommended:** Install a special-purpose solids interceptor upstream of the grease interceptor to capture solid particles. Solids take up space and interfere with oil and grease separation. Also, food-waste solids that collect in a grease interceptor will decay and cause odour problems.
7. Do not pour coffee grounds or tea leaves down the drain.
8. **Recycling.** Develop and implement a plan to reduce, reuse and recycle waste materials.
 - Use a recycling service for your used cooking oil. Used cooking oil can be recycled into useful products such as soap, animal feed and biodiesel products.
 - Separate out food waste for delivery to a centralized composting site.
9. Cleaning metal of kitchen exhaust systems.

Grease that builds up on exhaust hoods, filters, ducts and fans is usually removed and cleaned to the bare metal by a certified service company. The following cleaning procedure is recommended:

- Use hand scrapers to remove as much grease as possible from the exhaust system. Collect and store the grease in a separate container labeled “waste grease.”
- Wash the exhaust system with a caustic cleaning solution, collecting the water in a bucket.
- Neutralize the wash water in the bucket by adding a weak acid such as lemon juice, citric acid or a little vinegar.
- Skim off any grease floating in the bucket and store it in the waste-grease container.
- Pour the neutralized water from the bucket into a drain that is connected to a grease interceptor. Be careful not to pour the solids at the bottom of the bucket into the drain. Store the solids in the waste-grease container.

^① Greater Vancouver Regional District (GVRD), “Best Management Practices & Code Practices for Waste Water Management at Food Sector Establishments”, Nov. 2001, pp 8, 10. *Note: Republishing of this information does not infer an endorsement by the GVRD.

Additives

Often, chemicals and bacteria are used in Grease Interceptors to improve their efficiency. Some methods extend the routine maintenance intervals while others are ineffective. The use of chemicals, often touted as environmentally friendly enzymes or emulsifiers, work by changing the structure of the grease. The use of these items is ineffective and banned in a number of jurisdictions.

The use of bacteria, or bioremediation, can be effective if managed properly. The bacterium digests the greases into its acceptable by-products, CO₂ and water, similar to a sophisticated wastewater treatment plant. Please note: Bioremediation does not eliminate the need for monitoring effluent quality, and the routine maintenance to remove food solids. A solids interceptor should be used in conjunction with an automated bacteria injection system.

It is important to use the right product for the job. There are a number of bacteria products on the market that are ineffective. To select an effective product, check to see if it is patented. Also ensure that the product is formulated by microbiologists, conducting strict quality control for its cell plate counts and absence of pathogens. Finally make sure the product contains live vegetative strains rather than spores. It is recommended you solicit product specification sheets from the manufacturer. Select a product that:

- is a live vegetative bacteria at high concentrations that is lyophilized and then liquid stabilized
- does not contain surfactants, soaps, enzymes, pathogenic microorganisms
- ensures the product is formulated by microbiologists, conducting strict quality control for its cell plate counts
- the manufacturer is able to provide toxicology data on bacterial species, MSDS as well as Emulsification and Resuspension Assays to prove the product does not have adverse emulsification or resuspension properties
- will be active between 40°F-120°F (40°C-48°C) and between pH 5- 9
- check with your local authority having jurisdiction regarding what other approvals are required, to see if the product is certified by the USDA, EPA (DfE), OSHA and FDA for United States and DSL for Canada.

Troubleshooting

Symptoms	Cause	Corrective Action
Strong pungent odour.	Solids are accumulating & fermenting in the holding tank.	Install a solids trap upstream of the system. O-ring gasket is damaged and needs replacing. Increase cleaning frequency.
Sink has backed up with water.	The flow control orifice is blocked. The flow control and grease trap is undersized. The grease trap is full of solids and/or grease.	Close the ball valve or plug the sink and remove the obstruction by removing the flow control access lid. Install a properly sized grease trap. Increase cleaning frequency.
Grease Gobules plugging Flow Control Orifice.	Drainage run is too long. Effluent is cooling before it reaches trap.	Install Grease Trap closer to the fixture.
Solids plugging under the outlet baffle.	The Grease Trap is full. Food waste on pots, plates & utensils is not being scraped into the garbage & is being flushed down the sink. This food waste will breakdown and form a sludge on the bottom of the tank. Ensure the baffles are removed during the cleaning process. Grease trap has remained inoperable for a period of time.	Increase cleaning frequency. Install a solids trap and/or install a finer strainer basket or mesh in the sink drain basket. Flush the system for a period of time with hot water before decommissioning the system for the day.

Warranty

The Endura® Grease Interceptor is inspected for manufacturing defects, however, it is not always possible to detect hidden defects. The Endura® Grease Interceptor is warranted only to the extent that the manufacturer will replace without charge products proven to have manufacturing defects within twelve (12) months of the date of delivery thereof and provided Seller has been given an opportunity to inspect the product alleged to be defective and the installation and use thereof. NO WARRANTY IS INCLUDED AGAINST ANY EXPENSE FOR REMOVAL, REINSTALLATION OR OTHER CONSEQUENTIAL DAMAGES ARISING FROM ANY DEFECT. THE WARRANTIES SET OUT ABOVE ARE THE ONLY WARRANTIES MADE BY SELLER AND ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ENDURA® Grease Interceptor 10 Year Extended Warranty

The Endura® Grease Interceptor is warranted for ten (10) years from the date of installation based on the receipt of a completed warranty card (included with the grease interceptor). Said warranty card must be returned to the manufacturer within thirty (30) days of the installation date, in order to be eligible for this extended warranty.

The ten (10) year warranty covers defects resulting from faulty manufacture of materials as well as perforation of the grease interceptor based on normal operating conditions. The manufacturer does not provide a warranty for perforation resulting from mechanical or chemical causes of abnormal use.

The Endura® Grease Interceptor is warranted only to the extent that the manufacturer will replace, without charge, products proven to have manufacturing defects or perforation (other than perforation resulting from mechanical or chemical causes) within the specified ten (10) year warranty period and provided the manufacturer has been given an opportunity to inspect the product alleged to be defective and the installation and use thereof.

No warranty is provided for any expense for removal, reinstallation or other consequential damages arising from and defect or perforation. The warranties set out above are the only warranties made by the manufacturer and are expressly in lieu of all other warranties, expressed or implied, including the warranties of merchantability and fitness for a particular purpose.

Please Note: This warranty is offered by Canplas Industries Ltd. No claim should be placed upon the Installer or Service Company if properly installed and serviced.

Contractor Install Data

<p>Contractor/Installer (Print)</p> <p>Name: _____</p> <p>Co. Name: _____</p> <p>Address: _____</p> <p>_____</p> <p>Tel: _____ Fax: _____</p> <p>_____</p> <p>Date of Installation</p> <p>_____</p> <p>Signature of Installer</p> <p>_____</p>

For more information or technical assistance contact:

Tel: 1 800 461-1771

Fax: (705) 726-2186

Thank you to The Plumbing & Drainage Institute for their assistance with this publication.

Company policy is one of continual development and any specification contained in this literature may change without notice.
Actual products may not be exactly as shown.