
GREASE INTERCEPTORS AT FOOD SECTOR ESTABLISHMENTS

The City of Vancouver, like most municipalities, experiences sewer blockages caused by the accumulation of grease on the surfaces of sewer lines. Greasy waste water can be discharged to the sewer system from several sources including food service operations. In order to reduce sewer blockages, food service operations in the City of Vancouver that discharge waste water containing fats, oils or grease (FOG) need to install a grease interceptor.

Sentence 2.4.4.3.(1), Division B, Book II of the Vancouver Building By-law, states “Where a fixture discharges sewage that includes fats, oils, or grease and is located in a public kitchen, in a restaurant or in a care or detention occupancy, it shall discharge through a grease interceptor”(See Appendix A). Appendix A states “Grease Interceptors may be required when it is considered that the discharge of fats, oil or grease may impair the drainage system. Information on the design and sizing of grease interceptors can be found in Volume 4 of the ASPE 2008 “Data Book - Volume 4, Chapter 8, Grease Interceptors.”

Within Vancouver, the *GVS & DD Food Sector Grease Interceptor By-law No. 268, 2012* (the By-law) is administered and enforced by the City of Vancouver. The By-law authorizes the discharge of waste water from food sector establishments subject to the provisions of the By-law. The By-law can be found at http://www.metrovancouver.org/boards/Bylaws1/GVSDD_Bylaw_268.pdf

EXEMPTION

A Food Sector Establishment (FSE) is defined in the By-law. Examples of food sector operations that do not require a grease interceptor are:

- Lunch rooms (but not cafeterias), kitchenettes in motels and bed and breakfast operations.
- Community facilities with limited food service capabilities where food is prepared off-site and dishes, pots and cutlery are washed off site.
- The FSE sells food but does not prepare any food and does not use or provide permaware. Examples may include gas stations, convenience stores and corner stores.
- The FSE prepares food containing fats, oils or grease but the dishes are washed in a different location that has a grease interceptor and is subject to the By-law.

Any other operations in Vancouver not listed above that claim they do not generate wastewater containing fats, oils or grease may request an exemption by contacting the Environmental Protection Branch at 3-1-1 or outside Vancouver at 604-873-7000.

RATINGS FOR PLUMBING FIXTURES

Grease interceptors shall be sized according to the sum of the surge flow rates that will discharge simultaneously from all the plumbing fixtures connected to the grease interceptor. Mop sinks and floor drains are considered to be non-simultaneous if they are used outside of food preparation hours. If so, their respective surge flow rates are not used for the grease interceptor sizing calculation. The following fixtures in the kitchens, food preparation areas or clean up areas must be connected to the grease interceptor(s):

- All sinks (except dedicated hand sinks)
- Mop sinks
- Wash down hoods
- Floor drains in the kitchen area
- Dishwashers - sized per outlet diameter, or per published discharge flow rates
- Floor drains under garbage compactors
- Any other fixture that discharges wastewater containing fats, oils and grease.
- Garbage grinders shall be connected to a solids interceptor which may be required to be connected to a grease interceptor. More information can be found in *Bulletin 2004-003-EV Solid Interceptor*.
- Cooling water and clean condensate shall be connected to the storm sewer system.

For sinks calculate the total volume and assign a 1 minute drain time

Example: a two compartment sink measuring 36"x22"x14"
 (36x22x14) divided by 231 = 48.0 USG, with a 1 minute drain time = 48 USgpm.

For floor drains use the following table for each floor drain line.

For other fixtures such as dishwashers use the manufacturers flow rate or the following table:

Outlet or Trap Size	Surge Flow Rate	
	Litres/minute	US Gallons/minute
Inches (or millimetres)		
1.5" (38mm)	57	15
2.0" (51mm)	83	22
2.5" (64mm)	114	30
3.0" (76mm)	142	37.5
4.0" (102mm)	170	45

GREASE INTERCEPTOR SIZING AND INSTALLATION

- Calculate the sum of the surge flow rates from all the simultaneous fixtures connected to the grease interceptor using the calculations and table above.
- Design an interceptor equivalent to the standards set out in Part 4 of the By-law, or select a pre-manufactured interceptor rated to handle the total surge rate.
- The sum of the surge flow rates of all fixtures discharging to a grease interceptor shall not exceed the designed flow rate of the unit.

- More than one grease interceptor may be used in any operation to accommodate the flows.
- Grease interceptors shall be located such that they are readily accessible for inspections and pump outs.

SERVICING

Servicing and maintenance is essential for the efficient operation of grease interceptors. The By-law requires grease interceptors be examined and cleaned. Cleanings are required at least once every 90 days or when the total thickness of fats, oils and grease and solids in the grease interceptor is equal to 25% or more of the waste water depth. Cleaning must include a full evacuation of the grease interceptor and inspection of all internal components of the interceptor.

Records of each examination and cleaning is required and shall be kept and maintained on the premises for at least two years.

The addition of enzymes, solvents, bacteria, hot water or other biological or chemical substances to facilitate the passage of fats, oils and grease through a grease interceptor is prohibited.

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