



Pipe almost completely blocked with FOG

Sizing your grease interceptor

If fats, oil and grease (also known as FOG) go down the drain and into the wastewater system, they can lead to blocked pipes, reduced plumbing flow, odours and sewer backups. A grease interceptor is designed to prevent this.

A grease interceptor must be properly installed, maintained and cleaned on a regular schedule. As well, it must be the appropriate size for the business to capture and contain FOG efficiently until it can be properly disposed of.

Grease interceptors come in a variety of sizes and are rated by the manufacturer for different flow rates. Your grease interceptor is considered undersized if it cannot manage the volume of water that runs through it or if it is not able to separate FOG from kitchen wastewater properly. Undersized grease interceptors get overwhelmed and release excessive amounts of FOG, which can cause issues for both private and municipal wastewater systems.

Having an appropriately sized grease interceptor is also a compliance requirement per Wastewater Bylaw 14M2012, in accordance with CAN/CSA B481 and the National Plumbing Code of Canada. Failure to follow these requirements can result in fines or prosecution under any or all of these regulations.

A certified plumber is the best person to help determine if your interceptor is properly sized for the volume of water and fixtures running through it. Grease interceptor sizing calculators are also available on the internet.

On the following page is an example of how to calculate the correct grease interceptor size for your business. Depending on your set up, the formula can be complicated and there are additional factors that are not considered in the calculation such as

- The amount of equipment washed
- The type of activity at each fixture (prep sink, rinse sink, mop sink etc.)
- Average number of customers served
- Type of cuisine
- Quality of water to be discharged through the interceptor
- Cleaning frequency (smaller interceptors need to be cleaned more often)

Grease interceptor sizing calculation

1. Determine all of the fixtures that connect to each interceptor in your facility. For this example, we have two sinks connected to one interceptor.

Note: if a dishwasher is used at the facility it may be required to be connected to its own dedicated grease interceptor.

2. Next, calculate the peak flow rates for each fixture by measuring the size. Sink One is 0.4 metres deep x 0.4 metres high x 0.4 metres wide and Sink Two is 0.3 metres deep x 0.3 metres high x 0.3 metres wide.

3. Convert cubic meters to litres by multiplying by 1,000.

4. Once you have the volume of both sinks, calculate 75 per cent of those volumes by multiplying by 0.75.

Note: see chart below for steps 2-4



Plastic grease interceptor

Example	Sink One	Sink Two
Calculating sink volume	<p>2. 0.4 m x 0.4 m x 0.4 m</p> <p>3. = 0.064 cubic metres (m³) x 1,000 = 64 litres (L)</p> <p>4. 64 x 0.75 = 48 L</p>	<p>2. 0.3 m x 0.3 m x 0.3 m</p> <p>3. = 0.027 cubic metres (m³) x 1,000 = 27 litres (L)</p> <p>4. 27 x 0.75 = 20.25 L</p>
Combined volume	48 litres + 20.25 litres = 68.25 litres.	

5. Assuming a drain down time of one minute, (meaning it takes the sink one minute to completely drain from full), the peak flow rate for the two sinks is 68.25 litres/minute. Therefore, an interceptor rated above 68.25 litres/minute should be adequate for this kitchen's needs if proper best management practices are consistently followed and cleaning and maintenance are completed regularly.

If the baseline interceptor sizing requirements are met and the business is still having problems controlling FOG, you can also investigate the following solutions to attain compliance:

- Change best management practices to reduce the amount of FOG entering the interceptor, such as wiping and scraping dishes and equipment before soaking or washing.
- Increase the interceptor cleaning frequency.
- Install a hydro-mechanical grease interceptor.
- Make changes to the interceptor (e.g. fix, increase size, install an additional one).

For more information on grease interceptors and best management practices visit calgary.ca/FOG or contact 311