

Standards and Requirements

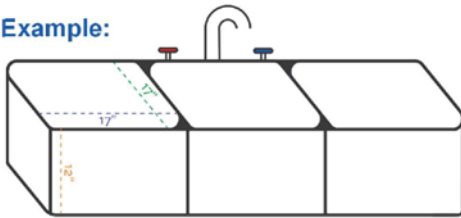
In reference to the Halifax Water Regulations Section 70, the following standards are approved by Halifax Water for Grease Interceptors:

- Hydromechanical Grease Interceptors (HGI)
 - CSA B481
 - ASME A112.14.3
- Gravity Grease Interceptors (GGI)
 - IAPMO/ANSI Z1001

A one-minute drain-down time must be used to size the interceptor. Exceptions to the one-minute drain-down time requirement may be permitted in extenuating circumstances; however, an in-depth analysis of the operation will be required prior to drain-downs longer than one minute being approved.

Example Calculation - HGI

Example:



- 1 minute drain down
 - 34 GPM
 - Minimum size HGI 35 GPM

The peak flow rate for a 3-compartment sink, measuring 17" x 17" x 12", and using 75% of the volume of each compartment, would be as follows:

$$\begin{aligned}
 \text{GPM} &= ((\text{Length} \times \text{Width} \times \text{Depth}) \div 231) \times 75\% \\
 3 \times (17" \times 17" \times 12") &= 10,404 \text{ in}^3 \\
 10,404 \text{ in}^3 \div 231 \text{ in}^3/\text{gal} &= 45 \text{ gal} \\
 45 \text{ gal} \times 0.75 &= 34 \text{ gal} \\
 34 \text{ gal} \div 1 \text{ minute} &= 34 \text{ gpm}
 \end{aligned}$$

Therefore, a 3-compartment sink measuring 17" x 17" x 12" would require a Grease Interceptor rated at 35 gpm.

Example Calculation - GGI

A restaurant with the following fixtures and equipment and requires a Gravity Grease Interceptor sized.

- One food preparation sink
- One mop sink
- Three floor drains
 - one in the food prep area
 - one in the grill area
 - one receiving the indirect waste from the ice machine

Number	Fixture	DFU ¹	Total
3	Floor drains	2 each =	6 DFUs
1	Mop sink	3 each =	3 DFUs
1	Food prep sink	3 each =	3 DFUs
Total =			12 DFUs

¹DFU counts collected from Table 1

Using Table 2, 12 DFU falls between 8 and 21 DFUs. 21 DFU is selected because it is the higher number meaning the Gravity Grease Interceptor will be sized at a minimum of 750 gallons.

Tables - GGI

Table 1 - Connection DFU Chart

Fixture	DFU
Commercial Sink with Food Waste	3
Kitchen Sink (domestic)	2
Bar Sink	2
Wash Sink	2
Service or Mop Sink	3
Dishwasher (domestic)	2
Floor Drain	2
Drinking Fountain or Water Cooler	0.5
Other Contributors	DFU
1½ inch trap & trap arm	1
1½ inch trap & trap arm	3
2 inch trap & trap arm	4
3 inch trap & trap arm	6
4 inch trap & trap arm	8
Flow of 1.0 to 7.5 gpm	1
Flow of 7.6 to 15 gpm	2
Flow of 15.1 to 30 gpm	4
Flow of 30.1 to 50 gpm	6

Table 2 - DFU to Interceptor Size

DFUs ^{2,3}	Minimum Interceptor Volume (gal)
≤ 8	500
21	750
35	1000
90	1250
172	1500
216	2000
307	2500
342	3000
428	4000
576	5000
720	7500
2112	10000
2640	15000

Notes:

² The maximum allowable DFUs plumbed to the kitchen drain lines that will be connected to the grease interceptor.

³ Where the flow rate of directly connected fixture(s) or appliance(s) have no assigned DFU values, the additional grease interceptor volume shall be based on the known flow rate (gpm) (L/s) multiplied by 30 minutes.

For more information on Grease Interceptors, please see [Halifax Water's Pretreatment Requirements Manual for Wastewater and Stormwater Systems](#).

If you have any questions on Grease Interceptors, please contact us at P2@halifaxwater.ca.