Grease Interceptor Sizing for New and Replacement Interceptors

Directions: Complete this form and return it with your building plans, include additional pages as needed.

Interceptor must be sized to meet the maximum flow rate of all fixtures connected or the maximum flow rate of the sewer drain size if fixture flow rate is unknown. All fixtures that are grease laden or in food prep areas are required to be connected to the grease interceptor. All new grease interceptors must be rated with a minimum of a 90% efficiency rating unless otherwise approved. The following are known standards that meet this requirement. ASME A112.14, CSA B481, and PDI G101. Any other standard must be approved by Municipal Services.

Step 1: Grease Capacity

Sizing for New Grease Interceptors

$$G \ x \ M \ x \ D = V$$

☐ **X** ☐ **X** ☐ **=** ☐

Where:
- V = Grease interceptor capacity required (in lbs)
- G = Grease production (lbs grease/meal) from Table 1
- M = Number of meals or customers served per day
- D = Days per pump out cycle, allowed minimum is 30 days and a maximum of 90 days

Table 1. Grease Production

Grease Output	Example Entities	No Flatware (lbs grease/meal)	With Flatware (lbs grease/meal)
Low	Sandwich Shop, Convenience Store, Bars, Delicatessen, Snack Bar, Ice Cream Parlor, Hotel Breakfast Bar	0.005	0.0065
Medium	Coffee House, Café, Pizza, Grocery Store (no fryer) Cafeteria (no food prep), Greek, Indian, Japanese, Korean, Thai, low grease output entity with fryer	0.025	0.0325
High	Cafeteria, Family Restaurant, Fast Food, Bar and Grill, Bakery, Italian, German, Buffet, Grocery Store (with fryer)	0.035	0.0455
Very High	Steak House, Seafood, Mexican, Chinese, Fried Chicken, Barbecue	0.058	0.075

Step 2: Flow Rate
A one-minute drainage period should be used for interior interceptors and a two-minute drainage period should be used for exterior interceptors to ensure proper drainage of plumbing fixtures.

Plumbing fixture capacity calculation:
Fixture dimensions in inches (L x W x H) = cubic inches
Cubic inches ÷ 231 = fixture capacity in gallons *(231 cubic inches = 1 gallon)*
Fixture capacities in gallons X 0.75 = fixture one minute flow rate

If total fixture volume is unknown, flow rate can be determined using maximum flow the drainage line can carry based on a 2% slope and the Manning's Formula (Table 2).

Table 2. Maximum Flow Rate Based on Pipe Size

Pipe Size (inches)	Full-Pipe Flow (gpm)*	One-minute drainage period (gpm)	Two-minute drainage period (gpm)
2"	20	20	10
3"	60	75	35
4"	125	150	75

¼ inch per foot based on Manning's formula with friction factor N = 0.012

Fixture Flow Rate Calculation

Fixtures (e.g., 3 comp, mop sink, prep sink, hand sink, etc.)	Fixture Dimensions in inches (L x W x H = cubic inches)	Fixture Capacity (gal) Cubic Inches ÷ 231	75% capacity	Flow Rate (gpm)
			x 0.75	
			x 0.75	
			x 0.75	
			x 0.75	
			x 0.75	
			Total Flow Rate (gpm)	

Step 3: Sampling Port
A sampling port with a minimum diameter of 18" is required after the confluence of the treated grease waste and sanitary sewer line and before the City's sewer main. The location of the grease interceptor and sampling port must be included on the building or plumbing plans.

Make & Model of Grease Interceptor and Sampling Port to be used

Make & Model of Grease Interceptor	Rated Grease Capacity (lbs)	Rated Flow Rate (gal)
Make & Model of Sampling Port		

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