



Grease Trap Guide

Grease traps work by separating grease from water. Animal fats and vegetable oils are typically 10-15% less dense than water, preventing them from mixing and causing the grease to rise and float above the water. Grease traps use this principle to eliminate grease from your water supply in three steps:

1. **Flow rate reduction:** As wastewater enters the grease trap, its flow rate is reduced. The water cools and settles in the trap, giving the wastewater time to separate into distinct layers of grease and water.
2. **Trapping:** Once the wastewater is separated, the trap uses a system of baffles to trap the grease layer. It's important to note that most grease traps feature strainers that trap solids as water passes through. Any solids that make it through will settle into their own layer at the bottom of the trap and can be removed during maintenance.
3. **Separation:** With the grease trapped, the clean water is released through an outlet. Since grease and other debris will remain in the trap, it's essential to clean your grease trap regularly to ensure the best performance.

Grease Trap Sizes

Two major factors determine what grease trap size you'll need: the rate of incoming flow and local plumbing codes. Keep both factors in mind as you design your kitchen space to facilitate a safe and successful working environment for your staff. Continue reading to learn about both factors and how they relate to your kitchen:

- **Rate of incoming flow:** Typically measured in gallons per minute (GPM), the rate of incoming flow refers to the amount of water coming out of a faucet during a specified period. Also referred to as flow rate, it plays a significant role in determining grease trap capacity. The accepted capacity of a grease trap should generally be twice as much as the flow rate. For example, a 10 GPM grease trap has a rated capacity of 20 pounds.

- **Local plumbing codes:** These codes follow the guidelines established by the Plumbing and Drainage Institute (PDI), though it's important to note they can still vary **depending on location**. They determine the design and installation criteria of your grease traps to ensure kitchen safety. Communicate with local authorities to verify that your grease traps comply with all local laws and regulations.

Grease Trap Sizing Calculator

The following calculator will help you determine the flow rate of your sink so that you can choose the grease trap that matches your kitchen's needs.

1. Calculate the capacity of the sink in cubic inches (measurements of one compartment), and multiply that total by the number of compartments:
2. Length **x** Width **x** Depth = Cubic Inches
3. Convert the capacity from Total cubic inches to gallons per minute (GPM):
Number of Compartments **÷ 231** = GPM
4. Adjust for displacement (displacement takes into consideration the actual useable capacity of your sink):

$$\text{GPM} \times 0.75 = \text{GPM} \times 2 = \text{Flow Rate Capacity (lb.)}$$

If you are draining multiple sinks into one grease trap, use this formula to determine the recommended flow rate in GPM:

1. Use the grease trap sizing calculator to determine the flow rate for each individual sink that will be serviced by the trap.
2. Add together 100% of the largest flow rate, 50% of the second largest, and 25% of every other flow rate.

Grease Trap Maintenance

You should clean and maintain your grease trap every 1-3 months. The length of time you go between cleaning your trap can vary depending on how much grease your kitchen produces, and many professionals adhere to the 1/4th rule to set a cleaning schedule.

The 1/4th rule stipulates that you should clean your grease trap when it reaches a quarter of its capacity. Doing so allows you to prevent foul odors in the kitchen, reduce the risk of clogged pipes, and extend the life of your sink. It's important to note that some states require grease traps to be cleaned and maintained every 90 days regardless of how full they are.

Follow these tips to keep your grease trap maintained:

- **Invest in grease trap cleaning supplies:** Consider purchasing **rubber gloves**, nose plugs, **protective clothing**, scrapers, and various **maintenance tools**.
- **Clean with cool water:** Cool water allows fats, oils, and other greasy substances to float to the top faster. If you've recently run hot wastewater through your trap, wait at least 10 minutes for its contents to cool off before cleaning.
- **Test your work:** Before you finish, run a test to ensure your trap is completely clean. Verify that there are no blockages in the trap and that the water is draining properly.
- **Dispose of waste properly:** Use a double-lined garbage bag to hold all fats, oils, and greasy byproducts that you remove while cleaning.

Calculating Grease Trap Requirements For Dish Machines

The Plumbing and Drainage Institute recommends using the following grease trap sizes for your dish machine:

- **10-15 Gallon Capacity Dish Machine Tank:** 15 Pound Grease Trap
- **20-30 Gallon Capacity Dish Machine Tank:** 20 Pound Grease Trap
- **30-50 Gallon Capacity Dish Machine Tank:** 25 Pound Grease Trap
- **50-70 Gallon Capacity Dish Machine Tank:** 35 Pound Grease Trap
- **70-100 Gallon Capacity Dish Machine Tank:** 100 Pound Grease Trap