



City of El Cajon
Building and Fire Safety Division
 200 Civic Center Way
 El Cajon, CA 92020
 Phone: (619) 441-1726

Grease Hood and Duct Sizing (Type I Hood System)

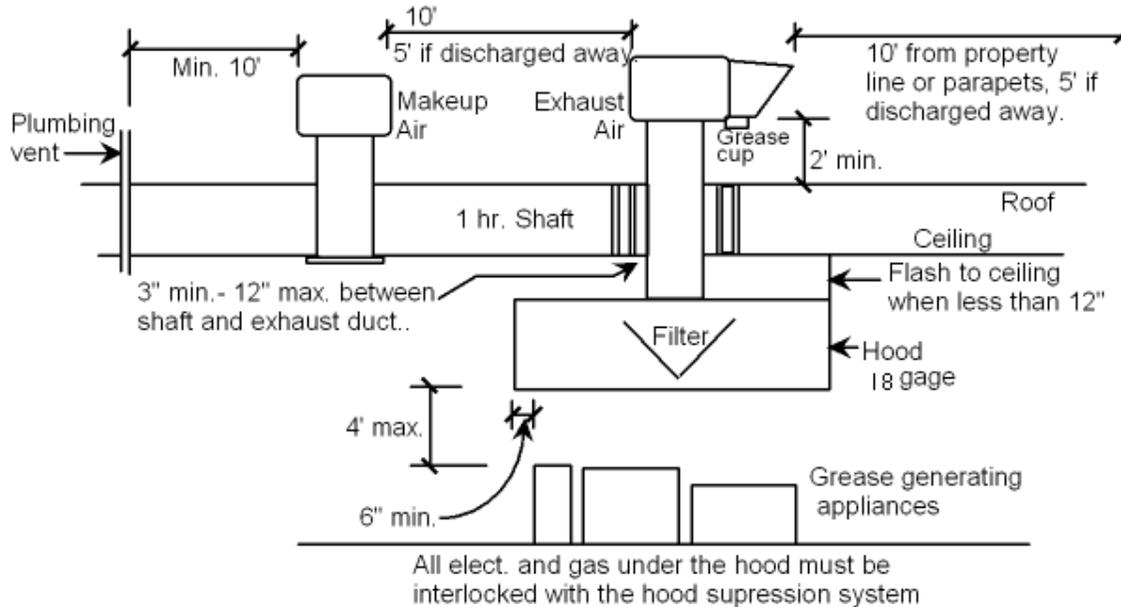


Table 508.5.1.2 Extra-heavy-duty cooking appliance airflow (solid fuel, charcoal, briquette or mesquite)

- Single island canopy Minimum 700 Cubic foot per minute per linear foot of hood
- Wall-mounted canopy Minimum 550 Cubic foot per minute per linear foot of hood

Table 508.5.1.3 Heavy-duty cooking appliance airflow (gas under-fired broilers, gas chain broilers, wok ranges & over-fired (upright) broilers)

- Single island canopy Minimum 600 Cubic foot per minute per linear foot of hood = Airflow
- Wall-mounted canopy Minimum 400 Cubic foot per minute per linear foot of hood = Airflow

Table 508.5.1.4 Medium-duty cooking appliance airflow (hot-top or open-burner ranges, flat and double sided griddles, fryers i.e. [deep, fat donut, kettle, and pressure], and conveyor pizza ovens)

- Single island canopy Minimum 500 Cubic foot per minute per linear foot of hood = Airflow
- Wall-mounted canopy Minimum 300 Cubic foot per minute per linear foot of hood = Airflow

Table 508.5.1.5 Light-duty cooking appliance airflow (ovens, steam-jacketed kettles less than 20 gal, pasta cookers, steamers, skillets, salamanders)

- Single island canopy Minimum 400 Cubic foot per minute per linear foot of hood = Airflow
- Wall-mounted canopy Minimum 200 Cubic foot per minute per linear foot of hood = Airflow

To determine if your grease hood is properly sized, the Velocity must be between 500 and 2,500 feet per minute. 511.2 Start with airflow. To calculate the airflow, multiply the minimum CFM from above by the linear foot of the hood.

CFM _____ **X Length of hood** _____ = **Airflow** _____,

(Example: A Broiler with a wall mounted canopy will use 400 CFM times a 4 foot hood equals 1,600 CFM Airflow)

Then you need the duct size.

Duct size in sq. ft. = Inches x Inches ÷ 144 = Duct size _____

(Example: a 12 inch by 12 inch duct divided by 144 is 1 square feet. Use 1 as duct size.)

To determine the velocity through the duct, divide the airflow from above by the duct size from above.

Airflow _____ ÷ **Duct size** _____ = _____ **Velocity must be between 500 and 2,500**

(Example: an airflow of 1,600 divided by 1 would be 1,600. 1,600 is between 500 and 2,500 so it works.)