

## Type 1 vs. Type 2 Exhaust Hoods

### What's the Difference?

#### Type I Hoods vs. Type II Hoods

The installation of a proper ventilation system is essential to the safety of any kitchen. Type I and Type II hoods that can be found in most restaurants and commercial kitchens.



This is defined by the International Mechanical Code, 2015 version referenced below.

#### Type I Hoods

IMC 507.2 Type I hoods.

Type I Hoods are designed to remove heat, smoke, condensation, and other greasy by-products of cooking. Cooking of animal protein produces grease and grease laden vapors. Type I hoods (commonly referred to as "grease hoods") capture the air above cooktops, deep fryers, griddles, grills, woks, charbroilers, (tilting skillets, braising & frying pans, infrared broilers, stoves, ranges, barbecue equipment, salamanders) and open-flame stoves. The hood's filter captures grease and other contaminants before the air is exhausted to the exterior through a system of ducts.

**Type I hoods shall be installed over medium-duty, heavy-duty, and extra-heavy duty cooking appliances. Type I hoods require regular cleaning in order to prevent grease fires.**

#### Type II Hoods

IMC 507.3 Type II hoods.

Type II hoods shall be installed above dishwasher and appliances that produce heat or moisture and do not produce grease or smoke as a result of the cooking process, except where the heat and moisture loads from such appliances are incorporated into the HVAC system design or into the design of a separate removal system. Type II hoods shall be installed above all appliances that produce products of combustion and do not produce grease or smoke as a result of the cooking process.

For example, Type 2 hoods are used to exhaust the excess heat produced by ovens, pasta cookers and commercial dishwashers.

These hoods, also referred to as condensate hoods, help remove excess heat from the air, creating a more comfortable work environment for the individuals working nearby. Spaces containing cooking appliances that do not require Type II hoods shall be provided with exhaust at a rate of 0.70 cfm per square foot. For the purpose of determining the floor area required to be exhausted, each individual appliance that is not required to be installed under a Type II hood shall be considered as occupying not less than 100 sq. ft. Such additional square footage shall be provided with exhaust at a rate of 0.70 cfm per square foot.

UL710 (Underwriter's Laboratory Commercial Grease Hood Listing) has definition of Light, Medium, Heavy, and Extra-Heavy appliances and are listed in IMC 710 Glossary 5.5.

## How about Pizza Ovens?

There is no clear practiced standard for Pizza Ovens. Type 1 and to a lesser extent Type 2 Hoods may be the preference in any given jurisdiction. Direct Venting from the Oven, requiring no hood, is also permitted in many jurisdictions. Many Pizza Oven manufacturers have UL/ETL tested for Direct Venting application. The combination of a high Duct Exhaust temperature (>550°) and the requirement for UL2221 (2-hr Fire Rating/ zero clearance to combustibles) will in most cases create the requirement for a Type 1 Hood be used.



## What is a Commercial Cooking Appliance?

The definition of commercial cooking appliance under IMC Section 202 and the kitchen exhaust hood provisions under IMC 507.2 do not provide specific demarcations to answer this question for every situation and circumstance. Whether a cooking appliance is a commercial cooking appliance depends upon several variables and factors, including the nature of use, the frequency of use, the type of appliance, and even the type of food involved. IMC 202 broadly defines a commercial cooking appliance as appliances that produce “grease [laden] vapors, steam, fumes, smoke, or odors that are required to be removed” from a commercial “food service establishment.”

A food service establishment is even more broadly defined as including any building or portion thereof used for the preparation and serving of food. IMC s. 507.2.3 requires domestic cooking appliances utilized for commercial purposes shall be provided with Type I or Type II hoods as required for the type of appliances and processes in accordance with Sections 507.2, 507.2.1 and 507.2.2.

A dwelling unit, or either a dorm room or hotel sleeping room with a stove, oven, microwave, coffee maker, or toaster does not constitute a food service establishment. In addition, either an employee break room or a hotel/motel breakfast bar with microwaves, coffee makers, and toasters does not constitute the type of food service establishment that would warrant a full-blown kitchen ventilation system.

This still leaves a wide variety of occasions, situations, and operations in “commercial buildings” where food is prepared and sold, such as restaurants, taverns, cafeterias serving hospitals or dormitories, concession stands serving high school gymnasiums, and domestic kitchen facilities in church basements and convenience stores.

Many convenience stores offer, besides coffee, a hot dog or a slice of pizza. Warming trays, ovens, or containers (e.g. crock pots) for such items as hot dogs or pre-cooked bratwursts, and enclosed single-pizza ovens at convenience stores are not pre-determined to be “commercial cooking appliance.” If the appliance is not a “commercial cooking appliance,” a Type I or II hood under IMC 507 is not required. “Commercial cooking appliances”, such as those used in cafeterias, restaurants, dormitory kitchens, school kitchens, institutional kitchens, and banquet facility kitchens, that produce grease-laden vapors must be provided with a Type I hood. These appliances include deep fryers, griddles, tilting skillets or woks, braising and frying pans, charcoal broilers, salamander and upright broilers, infrared broilers, stoves and ranges, and barbecue equipment. Also, the type of food being prepared is a factor in whether grease-laden vapors are produced with the appliance. Commercial cooking appliances which are used in such facilities and which produce copious amounts of steam and considerable smoke, or fumes, but not grease-laden vapors or copious amounts of smoke, must be provided with at least a Type II hood”

Additional Contributing Sources:

Accurex - Tyler Schilling – Product Manager Accurex

ProMatcher – Staff

Wisconsin Department of Safety and Professional Services Division of Industry Services

Reach out to [jdahlheimer@duravent.com](mailto:jdahlheimer@duravent.com) for questions and additional information to help your design decisions

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