



DNVFRS - CLASSES OF COOKING OPERATION GUIDELINES

This Guideline is intended to provide you with basic decision-making criteria related to the need for suppression and/or ventilation in your commercial cooking operation. This Guideline is not intended to replace the need for a registered professional. Use this Guideline as a tool to determine the classification of a cooking operation in conjunction with Fire Department and Building Department staff advice, as well, a registered professional if necessary. In general, classification of cooking operations will result in the determination of the requirement for suppression and ventilation.

Class 1 Cooking Operation (*Grease-Laden Vapours*)

A Class 1 Cooking Operation is defined as any cooking process which produces significant smoke or grease-laden vapours. It also includes any equipment which has been designed by the manufacturer to be able to produce significant smoke or grease-laden vapours, except where specifically approved under another Class. Engineered drawings for a NFPA 96 compliant hood, ventilation and suppressions system, along with equipment specification documents will be required at the time of building permit application.

The following requirements apply to Class 1 Cooking Operations:

- Full compliance with NFPA 96 (*Type I Hood*) for suppression and ventilation.
- Mechanically engineered drawings are required to be submitted via permit process detailing the kitchen equipment lineup, nozzles and suppression design, hood and backsplash design, and ducting c/w cleanouts and related design specifications.
- Air balancing (vented air versus makeup air) will need to be provided.

Examples of Class 1 Cooking Operations include but are not limited to:

- Cooking operations outside the scope of Classes 2 through 5.
- The following commercial equipment or, domestic equipment (see Note 3 on last page) used in a commercial food-producing operation: ☐
 - Range (burners or flat top), hot plate (gas burner, electric coil or flat top), deep fat fryer, griddles, broilers, induction cooker, electric frying pan, conveyor convection oven if used for cooking chicken wings or other bulk meat, oven used for cooking meat, char broiler, wok, Donair vertical broiler, tilting skillet, braising pan, any equipment recommended to have fire suppression by the manufacturer, and any equipment which produces or has been designed by the manufacturer to have the potential to produce comparable amounts of smoke or grease laden vapours (NFPA 96-A.10.1.2 Referenced Edition).
- Cooking operations which receive complaints of producing objectionable odours or are found to cause interior build-up of grease or smoke residue (Provincial Health Act).

DNVFRS - Classes of Cooking Operation Guidelines

Class 2 Cooking Operation (Steam and Heat Removal ONLY)

A Class 2 Cooking Operation is defined as any cooking equipment or process which produces significant steam or heat but does not produce grease-laden vapours. The BC Building Code Division B – Part 6 requires that air contaminants be removed at their point of origin. A mechanical engineer will be required to take into consideration the HVAC requirements for the space, as well as any additional requirements for cooking equipment. Engineered drawings for ventilation and equipment specification documents will be required at the time of building permit application.

The following requirements apply to Class 2 Cooking Operations:

- Type II hood and exhaust with HVAC ducting.
- If the ductwork is combined with ductwork serving a Class 1 Cooking Operation, then the ventilation for the Class 2 Cooking Operation is required to comply with NFPA 96 (Referenced Edition).
- Menu and details of cooking process that reflect a Class 2 cooking operations.
- If acceptable to the Fire Department and Building Department, an appliance that is designed with the potential for Class 1 Cooking, and that will only be used for Class 2 Cooking, may be acceptable with a permanent-type sign posted that states “This is a Class 2 Cooking Operation - No Production of Grease Laden Vapours Permitted.”

Examples of Class 2 Cooking Operations include but are not limited to:

- Any of the following if they are 6 kW or greater: closed pizza oven, conveyor pizza oven (if used only for pizza or bread), coffee roaster, hot dog display heater, popcorn maker, roll warmer, steam reconstitution device, steamer, toaster, food dehydrators, and regular or convection oven.
- The following would be considered appliances designed with the potential of Class 1 Cooking but could be used for Class 2 Cooking (when boiling water or reheating):
 - A domestic range, hot plate or induction cooker in a commercial cooking establishment used only for non-grease applications such as boiling water (e.g., potatoes, pasta, rice), reheating pre-made soups, heating beverages (e.g., hot chocolate) or melting chocolate.

Class 3 Cooking Operation

A Class 3 Cooking Operation is defined as any cooking equipment or process where limited smoke and limited grease-laden vapours are produced such as in normal usage in a single-family home. This Class of Cooking Operation typically utilizes a domestic range.

The following requirements apply to Class 3 Cooking Operations:

- A domestic hood with a grease filter is the required minimum.
- No commercial cooking is permitted.
- Provide a sign that reads: “This is a Class 3 Cooking Operation - No Production of Grease Laden Vapours Permitted”.

DNVFRS - Classes of Cooking Operation Guidelines

Examples of Class 3 Cooking Operations include but are not limited to:

- Single family usage.
- Domestic range in a Fire Hall.
- Domestic range in an amenity room in a residential building, care home, congregate housing, employee break room or church where there is no cooking that produces grease-laden vapours, e.g., used for food warming or baking cakes (NFPA 96-A.1.1.4 Referenced Edition).
- A home-economics classroom in a high school where only domestic cooking is taught.
- Domestic range in a home-based Licensed Childcare Facility (menu is regulated by the Vancouver Coastal Health Authority).
- A single domestic range used in a showroom that sells non-food products, such as a showroom for selling domestic ranges, where the range is used once on the occasional day for a small number of people.

Class 4 Cooking Operation (Self-Contained)

A Class 4 Cooking Operation is defined as cooking equipment listed by an accredited certification organization such as ULC, cUL or ETL to ventilate into the room. These devices typically have their own fire suppression and grease filtering systems.

The following requirement applies to Class 4 Cooking Operations:

- Comply with the manufacturer's installation, operational and listing requirements.

Examples of Class 4 cooking equipment include but are not limited to:

- Giles Ventless Hood Fryer
- Perfect Fryer PFC model series
- Ventless commercial deep fat fryers
- Belshaw Donut Robot Fryer with Insider Ventless cabinet

Class 5 Cooking Operation (No Hood)

A Class 5 Cooking Operation is defined as cooking equipment where a hood is not provided. Products from the cooking operation may be removed by the room ventilation. Class 5 does not include cooking procedures which produce significant grease-laden vapours, steam or heat.

The following requirements apply to Class 5 Cooking Operations:

- Comply with the manufacturer's installation, operational and listing requirements.
- Provide a sign that reads: "This is a Class 5 Cooking Operation - No Production of Grease Laden Vapours Permitted".

DNVFRS - Classes of Cooking Operation Guidelines

Examples of Class 5 Cooking Operations include but are not limited to:

- The following if they are 6 kW or less: regular or convection oven, slow cooker, coffee roaster, hot dog display heater, pastry oven, closed pizza oven, popcorn maker, rice cooker, or toaster.
- Panini grills (for making Paninis, i.e., not for processes which cause grease-laden vapours such as grilling or braising meat).
- Microwave oven or crock pot.
- 2 burner induction for warming ONLY.

Notes

1. Regardless of if whether the examples are met, ventilation may be required as per the BC Building Code (refer to Building Department). A mechanical engineer may be required to confirm that the space does not require additional ventilation as a result of the cooking operations.
2. Where complaints are received by the Fire Department or Health Department, such as mould from too much moisture, over-heating in the work environment, objectionable odours, or build-up of grease or smoke residue, the owner or manager is responsible to cease cooking operations and make the required corrections. Corrections could include menu changes or applying for a building permit to comply with the appropriate Class of Cooking Operation.
3. All equipment must be listed and certified for use in Canada, rated for commercial use, and installed as per manufacturer's specifications.
4. The above examples are for convenience of interpretation only. Equipment not described in the above examples should be reviewed by a registered professional in consultation with the Fire Department and Building Department.

Important Note: All requirements in this guideline must be met in full and must also comply with the District of North Vancouver Fire Bylaw.

Contact Information:

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