

VENTILATION REQUIREMENTS FOR NAIL SALONS



**Town of Brighton
Office of the Fire Marshal**

MAY 2020

Ventilation Requirements for Nail Salons

Intent

This policy in accordance with the Code of the Town of Brighton and the New York State Fire Prevention and Building Code, is to clarify installation requirements regarding nail salon ventilation, including intent of these requirements.

Purpose

This policy recognizes the importance of an adequate ventilation system in nail salons, specifically a point of use exhaust design that predominantly eliminates any re-circulation of toxic air back into the space thereby meeting the intent of the Mechanical Code of New York State.

An independent exhaust mechanical ventilation system must be designed for nail salons so that fumes and dust from nail stations, at point of service, are exhausted directly to the exterior of the building. Make-up air is required and shall be considered for the entire mechanical exhaust ventilation system design.

Scope

Interlocking the exhaust system and light switching for the nail stations ensures that the exhaust system will be in full operation in compliance with all designed specifications or other equivalent design criteria, when nail station activities are occurring protecting occupants (public and employees) from harmful fumes or dust.

Code References

2020 Mechanical Code of New York State – Chapter 4 / Chapter 5

2020 Property Maintenance Code of New York State – Chapter 4

Plan Submittal Requirements

Mechanical plans with ventilation requirements shall be included with the building plan set upon submittal of the permit application.

Plans will be reviewed by the Town of Brighton for compliance.

A ventilation system for up to two (2) nail stations may be designed by a contractor. A ventilation system with three (3) or more nail stations must be designed by a New York State licensed design professional.

This policy also clarifies who can design a ventilation system for nail salons depending on the number of nail stations within the space. When three (3) nail stations or more are provided in a space, the complexity of the design increases for items such as duct sizing or adequately addressing make-up air for the entire ventilation system.

2020 Mechanical Code of New York

§M403.3.1.3 System operation. The minimum flow rate of outdoor air that the ventilation system must be capable of supplying during its operation shall be permitted to be based on the rate per person indicated in Table 403.3.1.1 and the actual number of occupants present.

§M403.3.1.5 Balancing. The ventilation air distribution system shall be provided with means to adjust the system to achieve not less than the minimum ventilation airflow rate as required by Sections 403.3 and 403.3.1.2. Ventilation systems shall be balanced by an approved method. Such balancing shall verify that the ventilation system is capable of supplying and exhausting the airflow rates required by Sections 403.3 and 403.3.1.2.

TABLE 403.3.1.1—continued				
MINIMUM VENTILATION RATES				
OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY #/1000 FT ² a	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R _p CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R _a CFM/FT ² a	EXHAUST AIRFLOW RATE CFM/FT ² a
Nail salons b, h	25	20	0.12	0.6

a. Based upon net occupiable floor area.

b. Mechanical exhaust required and the recirculation of air from such spaces as permitted by §M403.2.1 is prohibited (see §M403.2.1, Items 1 and 3).

h. For nail salons, each manicure and pedicure station shall be provided with a source capture system capable of exhausting not less than 50 cfm per station. Exhaust inlets shall be located in accordance with Section 502.20. Where one or more required source capture systems operate continuously during occupancy, the exhaust rate from such systems shall be permitted to be applied to the exhaust flow rate required by Table 403.3.1.1 for the nail salon.

§M502.20 Manicure and pedicure stations.

Manicure and pedicure stations shall be provided with an exhaust system in accordance with Table 403.3.1.1, Note h. Manicure tables and pedicure stations not provided with factory-installed exhaust inlets shall be provided with exhaust inlets located not more than 12 inches (305 mm) horizontally and vertically from the point of chemical application.

2020 Property Maintenance Code of New York State

Chapter 4 - Light, Ventilation and Occupancy Limitations

§PM401.1 Scope. The provisions of this chapter shall govern the minimum conditions and standards for light, ventilation and space for occupying a structure.

§PM401.2 Responsibility. The owner of the structure shall provide and maintain light, ventilation and space conditions in compliance with these requirements. A person shall not occupy as owner-occupant, or permit another person to occupy, any premises that do not comply with the requirements of this chapter.

§PM403.4 Process ventilation. Where injurious, toxic, irritating or noxious fumes, gases, dusts or mists are generated, a local exhaust ventilation system shall be provided to remove the contaminating agent at the source. Contaminated air shall be exhausted to the exterior and not be recirculated to any space.

If the exhausted air contains dust, dirt, chemicals or other contaminants, the exhaust may require additional treatment to prevent contamination of the exterior air (see Figure 403.4).

Signs Your Salon Needs Better Ventilation

It's a misconception that using your vision or sense of smell is a tell-tale indicator. You can be inhaling particles and not see or smell them. Here are a few more reliable signs:

- Strong product odors linger for more than 10 minutes after use.
- When someone uses a strong-smelling product, people on the other side of the salon detect the odor. You smell product odors when you open the salon in the morning.
- Windows and doors are closed and there is no mechanical ventilation system in place or turned on.
- Your only ventilation system is the built-in HVAC system, which does not have nail salon-appropriate filters.
- The walls "sweat" with moisture or the windows fog.
- Workers frequently have one or more of the following symptoms: headaches, dry or sore throats, blurry vision, watery eyes, insomnia, irritability, nausea, dizziness, cough, a runny or bloody nose, sneezing, tingling toes or fingers, drowsiness, chest aches or pains, shortness of breath, loss of coordination or appetite.
- Your clients, neighbors, and/or landlord complains about offensive odors.

Rational

The code does not provide prescriptive specifications on how to "capture the contaminants and odors at their source". One could assume that "capturing" can be accomplished either through a downdraft system, vertical up-draft (hood) system, or maybe even a flexible exhaust hose laid across the work area.

Providing a separate e-vac system at each work station, with a minimum of 50 cfm, is what the code requires.

Any of the above-mentioned methods can be used to meet this exhaust need. If the hood method is used, the cfm requirements may need to be increased based on the height of the hood above the work area.

At this time there are no prescriptive standards to follow. Performance testing will determine whether or not a specific method of "capture" is working.

The ceiling is not the source of the fumes, where the work is being done is. Exhaust at the ceiling is one of the worst places the exhaust could be taken from. The fumes get pulled up right past the people's face---where they breathe.

Position / Decision

The Town of Brighton is using 2020 Mechanical Code of New York State - Section 502.1.1, states "shall be located in the area of heaviest concentration of contaminants." which means at the table or at point of service - not the floor or ceiling.

Therefore, whether in a new or existing nail salon, ventilation shall be provided at the point of service as prescribed in the 2020 Mechanical Code of New York State for new installations and Section PM403.4 of the 2020 Property Maintenance Code of New York State for existing installations and must exhaust directly to the exterior.