



SUBCHAPTER 13
MECHANICAL VENTILATION, AIR
CONDITIONING, AND REFRIGERATION SYSTEMS

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ARTICLE 1 GENERAL

§[C26-1300.1] 27-771 **Scope.** -This subchapter shall establish the minimum safety requirements for, and control the design, construction, installation, alteration, and use of, systems for providing mechanical ventilation, air conditioning, air cooling, air heating, and refrigeration. In addition, within special flood hazard areas, and below the regulatory flood datum, as described in article ten of subchapter four of this chapter, mechanical ventilation, air conditioning, and refrigeration systems, and related equipment shall meet the requirements of the applicable provisions of reference standard RS 4-5.

§[C26-1300.2] 27-772 **Standards.** -The provisions of reference standard RS-13 shall be a part of this subchapter.

§[C26-1300.3] 27-773 **Definitions.** -For definitions to be used in the interpretation of this subchapter, see subchapter two of this chapter.

§[C26-1300.4] 27-774 **Plans.** -For the requirements governing the filing of plans and the work to be shown on plans, see subchapter one of this chapter.

§[C26-1300.5] 27-775 **Permits.** -For the requirements governing equipment work permits and equipment use permits, see subchapter one of this chapter.

§[C26-1300.6] 27-776 **General requirements. -**

(a) **Ventilation.** -The minimum quantities of air and other requirements for the ventilation of habitable and occupiable rooms shall be as required by subchapter twelve of this chapter, and for the ventilation of special uses and occupancies by subchapters seven and eight of this chapter.

(b) **Noise control.** -Noise control requirements for mechanical equipment shall be as required by subchapter twelve of this chapter.

(c) **Safety.** -All systems, equipment, and materials including any devices, apparatus, piping work, sheet metal work, insulation work, and supports therefor, used as part of or in connection with installations governed by this subchapter, shall be designed, installed, located, and operated so that they will not create an immediate or potential danger to life or impair public health or welfare. No piping of any kind, with the exception of piping required or, permitted under subchapter seventeen of this chapter, shall be permitted within a stair enclosure. Ducts protected in accordance with the requirements of this subchapter, which do not reduce the required clearances of a stair enclosure, are permissible.

(d) **Openings.** -No openings for outdoor exhaust air discharges, air intakes, or reliefs from equipment shall be located and constructed so as to:

- (1) Interfere with the proper functioning of other openings in the same building or in adjoining buildings.
- (2) Interfere unreasonably with the occupants of the same building or adjoining buildings or with the general public.
- (3) Create a fire or health hazard.

§[C26-1300.7] 27-777 **Construction.-**

The construction, installation, and alteration of systems for providing mechanical ventilation, air conditioning, air cooling, air heating, and refrigeration, shall be in accordance with the following:

- (a) Air conditioning and ventilating systems for all occupancies shall be constructed in accordance with the

provisions of reference standard RS 13-1. In addition, equipment used for air conditioning systems shall be constructed, installed and altered in accordance with the provisions of reference standards RS 13-7 through 13-15. Where any conflicts arise between the electrical provisions of the foregoing reference standards and the New York City electrical code, the provisions of the latter shall govern.

(b) Air conditioning systems for one- and two-family dwellings, for one story buildings four thousand square feet or less in gross floor area provided ducts do not penetrate fire divisions, and for buildings classified in mercantile occupancy group C, twenty-five hundred square feet or less in gross floor area shall be constructed and installed in accordance with the provisions of reference standard RS 13-4. Also see article eleven of subchapter fourteen of this chapter.

(c) Exhaust systems for cooking spaces requiring mechanical ventilation in accordance with the provisions of subchapter twelve of this chapter, except kitchens located within dwelling units, shall be installed as provided in reference standard RS 13-2.

(d) Restaurant cooking equipment shall be provided with a means of ventilating such equipment constructed in accordance with the provisions of reference standard RS 13-3, provided however that restaurant cooking equipment installed for periodic cooking use other than commercial [*sic*] only, in community rooms of multiple dwellings, firehouses and other low hazard occupancies as determined by the commissioner may be provided with a means of ventilation constructed in accordance with the provisions of reference standard RS 13-1.

(e) Air blower and exhaust systems, where required for the removal or conveying of dust, vapor, or other impurities, shall be installed in accordance with the provisions of reference standard RS 13-5.

(f) Refrigeration systems shall be constructed, installed, and altered in accordance with the provisions of reference standard RS 13-6.

(g) The utilization of city water in air conditioning and refrigeration systems shall be subject to the requirements of reference standard RS-16.

§[C26-1300.8] 27-777.1 Smoke control requirements.

(a) In all buildings classified in occupancy group C, D, E, F, G, H, J-1 or J-2:

(1) Ventilation systems supplying different occupancy groups shall not be interconnected, provided however that a ventilation system may serve two occupancy groups located on the same floor when the accessory use occupies less than twenty per cent of the floor area occupied by the principal use.

(2) Ventilation systems supplying corridors shall not be interconnected with systems serving other spaces, except that this requirement shall not apply to floors

used exclusively as office space in buildings classified in occupancy group E which are fully sprinklered.

(3) A ventilation system supplying any part of a means of egress shall not be interconnected with any other ventilation system.

(4) A ventilation system supplying public areas and assembly spaces shall have smoke detecting devices that will shut down the system upon detecting smoke.

(5) In buildings classified in occupancy group J-2, ventilation systems supplying individual apartments shall not be directly connected with any other ventilation system.

(6) Except in buildings classified in occupancy group J-2, and as otherwise provided in section 27-343 of article five of subchapter five of this chapter, either a combined heat and smoke damper or independent heat and smoke dampers shall be installed at any penetration of construction required to have a fire-resistance rating.

(b) In all buildings classified in occupancy group C, D, E, F, G, H or J-1, there shall be provided a system of mechanical means of sufficient capacity to exhaust six air changes per hour or one cfm/sq. ft., whichever is greater, from the largest floor in the building, using either dedicated fan equipment or the building ventilation system arranged to shut down automatically with manual override capability to exhaust one floor at a time through a roof or an approved location on an exterior wall other than a lot line wall.

§[C26-1300.9] 27-777.2 Ventilation in existing J-1 buildings. -In any existing building classified in occupancy group J-1, either seventy-five feet or more in height or containing thirty or more sleeping rooms:

(a) Where a corridor or space above a ceiling in a corridor is being used on or after February first, nineteen hundred eighty-four to furnish direct ventilation to a sleeping room or suite, such use shall, unless continued use is permitted by the commissioner, be discontinued by closing all openings between the corridor and sleeping room with construction having a fire-resistance rating equal to the construction in which the opening occurs. When continued use of corridor spaces as a plenum is permitted, smoke detecting devices shall be installed in accordance with the requirements of section 27-981 of article six of subchapter seventeen of this chapter and activation of any two detectors on a floor shall cause closure of all openings to that floor and shut-off of ventilation service to the floor.

(b) All corridors and other public areas not provided with natural ventilation meeting the requirements of section 27-761 of article eight of subchapter twelve of this chapter shall be provided with manual smoke purging by means of existing ventilation systems.

(c) The requirements of this section shall be complied with on or before April first, nineteen eighty-seven.

ARTICLE 2 INSPECTIONS AND TESTS FOR EQUIPMENT USE PERMITS

§[C26-1301.1] 27-778 General requirements.-

No required ventilating system, no voluntary air duct system containing smoke detection or fire protection devices that are required by this subchapter, and no refrigeration system shall be placed in operation, until it has been tested and inspected in accordance with the requirements of this subchapter and until an equipment use permit has been issued by the commissioner, except as hereinafter provided.

§[C26-1301.2] 27-779 Required ventilating systems.-

The following tests and inspection requirements shall be complied with in order to obtain an equipment use permit for a required ventilating system.

***(a) Procedure.-** A required ventilating system shall be subject to the requirements for controlled inspection as provided in article eight of subchapter one of this chapter except that it shall not be required that the architect or engineer be in the employ of the owner. Such requirements shall include (1) a controlled inspection to verify that the installation and operation of the completed system comply with the requirements of this subchapter, comprising tests to ascertain that the amount of air being supplied to and exhausted from each space conforms with the requirements of this code, and tests that all required smoke detection and fire protection devices are functioning properly; and (2) a controlled inspection comprising tests to verify that required fire dampers are installed and functioning properly as provided for in subdivision (d) of section 27-343 of this code. When a required ventilating system handles five thousand cfm or less, it shall be subject to controlled inspection except that the person making the inspection may be an architect, engineer or a person with at least five years of experience installing ventilating systems. However, if such a system exhausts any of the following:

(1) fumes, dusts, vapors or other noxious or injurious substances,

(2) substances that create a fire hazard,
then the person making the inspection shall be an architect or engineer. It shall not be required that the architect or engineer be in the employ of the owner. The test reports required under the provisions of article eight of subchapter one of this chapter shall be filed in the form prescribed by the commissioner. The form shall include the quantity of air supplied or exhausted by each outlet.

(b) Fire extinguishing systems.- No equipment use permit for a required ventilating system containing a required fire extinguishing system shall be issued until a signed statement has been obtained from a representative of the fire commissioner who has witnessed the test of the

extinguishing system and its control devices, certifying the fire commissioner's acceptance of such a system.

(c) Owner's statement.- A statement shall be filed with the commissioner by the owner or lessee of the building that the required ventilating system will be kept in continuous operation at all times during the occupancy of the building and, if any smoke or fire detection devices or fire extinguishing systems have been installed, that he or she will have such devices and the fan shut-offs actuated by them tested and inspected by a competent person or agency at one year intervals or less. The owner or lessee shall also state that he or she will promptly make any necessary adjustments and repairs to keep the ventilating system and its safety devices in proper operating condition. A record of each inspection and test shall be maintained on the premises by the owner or lessee, and records for at least the last two years shall be made available for inspection by the commissioner and the fire commissioner.

**Local Law 26-2004.*

§[C26-1301.3] 27-780 Voluntary ventilating systems or other voluntary air duct systems. -The following test and inspection requirements shall be complied with in order to obtain an equipment use permit for a voluntary ventilating system or other air duct system when smoke detectors or fire protection devices are required.

(a) Procedure.- A voluntary ventilating system or other voluntary air duct system shall be subject to test and inspection to ascertain that all smoke detection and fire protection devices are functioning properly, and that the installation conforms with the requirements of this subchapter.

(b) Fire extinguishing systems.- No equipment use permit for a voluntary ventilating system containing a required fire extinguishing system shall be issued until a signed statement has been obtained from a representative of the fire commissioner who has witnessed the test of the extinguishing system and its control devices, certifying the fire commissioner's acceptance of such a system.

(c) Owner's statement.- A statement shall be filed with the commissioner by the owner or lessee of the building that he or she will have such devices and the fan shut-offs actuated by them tested and inspected by a competent person or agency at one year intervals or less. The owner or lessee shall also state that he or she will promptly make any necessary adjustments and repairs to keep these devices in operation. A record of each inspection and test shall be maintained on the premises by the owner or lessee, and the records for at least the last two years of operation shall be made available for inspection by the commissioner and the fire commissioner.

§[C26-1301.4] 27-781 Refrigerating systems. -The following test and inspection requirements shall be complied

with in order to obtain an equipment use permit for a refrigerating system, except as hereinafter provided.

(a) Procedure.- A refrigeration system shall be designated for test and inspection under the requirements for controlled inspection as provided in article eight of subchapter one of this chapter, except that it shall not be required that the architect or engineer be in the employ of the owner. Test information and all other information required by reference standard RS 13-6 shall be posted, and the inspection shall be made of the completed system to verify that the installation complies with the requirements of this subchapter.

(b) Temporary permit.- A temporary equipment use permit shall be required for a nonoperating system in which a charge is maintained. See subchapter one of this chapter for provisions governing temporary permits.

***(c) Exception.-** No equipment use permit or temporary equipment use permit shall be required for any refrigerating system exempted under the provisions of section 27-189 of article eighteen of subchapter one of this chapter; for any system using a group A2, B1 or B2 refrigerant and having a prime mover of one horsepower or less; or for any system using water or air as a refrigerant.

**Local Law 32-2004.*

ARTICLE 3 OPERATION AND MAINTENANCE

§[C26-1302.1] 27-782 General requirements.- All systems shall be maintained in a clean and orderly condition, free from accumulations of dust, oily waste, or debris. All machinery and all operating devices on piping and ductwork shall be kept readily accessible for inspections and repair. Plenum chambers, air ducts, and cooling and heating coils shall be kept clean. Filters shall be cleaned or renewed at proper intervals to insure safe operation and adequate air flow and shall comply with the applicable requirements of the fire prevention code.

ARTICLE 4 POSTING

§[C26-1303.1] 27-783 General requirements. – Information to be posted shall be as required in reference standard RS-13. Method of posting shall be as required in subchapter one of this chapter.

ARTICLE 5 CODE REQUIREMENTS OF OTHER CITY DEPARTMENTS

§[C26-1304.1] 27-784 Electrical. -All electrical work shall be installed in accordance with the requirements of the electrical code of the city of New York.

§[C26-1304.2] 27-785 Air pollution. -The discharge

of odors, smoke, or other emissions into the open air shall be subject to the requirements of the New York City air pollution control code.

§[C26-1304.3] 27-786 Refrigeration.- For operating permits and qualification of operators for refrigeration systems, see the requirements of the fire department.