

1 RCNY §29-01

CHAPTER 29 SPRINKLER SYSTEMS

§29-01 Installation of Automatic Sprinklers in Halls and Rooms in Class "A" Multiple Dwellings Used For Single-Room Occupancy Under the Provisions of Subdivision 7-A of §4 and §248 of the Multiple Dwelling Law.

(a) Before the installation of any sprinkler system in any single-room occupancy building is begun, an application, together with plans and specifications for such installation shall be filed with and approved by the Department of Buildings. Plans shall show accurately, both horizontally and vertically, the arrangement and dimensions of the private halls and rooms and the areas to be sprayed by each sprinkler head.

Application and specification forms may be obtained at the borough office of the Department of Buildings. Applications shall be filed in the department office in the borough in which the premises are located. Applications and specifications shall be in triplicate. Preliminary plans may be on paper. Final plans shall be filed in triplicate on paper and microfilmed.

When it is proposed to supply a sprinkler system by means of a direct connection to a public water supply main, the specifications shall be accompanied by a letter from the Department of Environmental Protection, establishing the fact that the water-supply conditions and pressures are suitable to meet the requirements of these rules for water supplies for sprinklers.

(b) Sprinkler systems shall be of the automatic wet type.

(c) Water supply from public water mains will be acceptable when such supply will provide a minimum static pressure at the highest sprinkler head or heads of not less than 15 pounds per square inch.

Taps connecting to public water mains must be equal in size to the main pipe line, except that:

A two-inch (2") tap connecting to the public water main and immediately increased to two-and-one-half inches (2 1/2") direct connection to the public water main and,

A one-and-one-half inch (1 1/2") tap connecting to the public water main and immediately increased to two inches (2") in diameter, with piping of the same diameter extending into the building, shall be considered the same as a two-inch (2") direct connection to the public water main.

The sprinkler system of each building shall have a separate and independent source of supply. When a sprinkler system is supplied direct from a public water main, it shall be separately and independently connected to the public water main. However, a house service water supply connection may be taken from the sprinkler water supply connection to the public main, on the house side of the main shut-off valve for the building, provided the diameter of the house service water supply connection does not exceed one-half of the diameter of the sprinkler water supply connection. Only one connection of the domestic water supply to the sprinkler water supply line shall be permitted and no shut-off valve shall be placed on the sprinkler supply line other than the main shut-off valve for the building on the street side of the house service water supply connection.

(d) A gravity tank upon the roof will be required when the normal minimum water pressure from the public mains is insufficient, or, in lieu of a gravity tank, a pressure tank may be installed in the basement or cellar in accordance with the requirements hereafter specified in these rules.

The bottom of each gravity tank supplying the sprinkler system shall be elevated at least 20' above the roof.

Each gravity tank shall be filled through a fixed water supply tank of at least one-and-one-half inch (1 1/2") diameter and independent of the sprinkler pipe system, by means of an automatically controlled pump of a discharge capacity of at least sixty-five (65) gallons per minute against the total head, including friction at the discharge nozzle of the pump. The tank fill line shall be standard weight pipe, galvanized steel, or brass or copper pipe.

A gravity tank, if used exclusively to supply the sprinkler system, shall have an effective capacity of not less than 1,500 gallons.

Gravity tanks which serve both the house supply and the sprinkler system shall have a capacity of not less than 2,500 gallons.

All exposed water supply piping connecting with roof gravity tanks shall be properly protected against frost action by four layers of one inch (1") high-grade hair felt, and each layer of hair felt shall be covered with a layer of heavy tar paper.

Each wrapping must be securely fastened with heavy twine, and wrapping joints shall have a lap not less than two inches (2"), staggered with the laps of adjacent layers.

All coverings shall be finally covered with heavy canvas, painted with two coats of waterproof [*sic*] paint.

In lieu of the foregoing, three inch thick fiberglass in a metal shield may be used.

(e) Pressure tanks when used shall be capable of supplying actual water volume as required in subdivision (j) of this section of these rules. The required water volume shall be two-thirds of the tank capacity and the [*sic*] air pressure one-third. For the pressure to be maintained, pressure tanks shall be constructed and tested in accordance with the requirements of the ANSI/NFPA 22 of Reference Standard RS 17-10 of the Administrative (Building) Code.

At the end of each pressure tank there shall be a glass water level gauge, and the pressure tank must also be provided with a pressure gauge and manhole for access to the tank.

The filling pump for the pressure tank shall have a capacity of 65 gallons per minute with sufficient strength to pump water into the pressure tank against full air pressure.

The air compressor for the pressure tank must be capable of delivering ten cubic feet of air per minute for the permanent maintenance of the required maximum air pressure in the tank.

The filling pipe from pump to air compressor must be provided with a relief valve set at 15 pounds in excess of the maximum air pressure carried in the tank.

(f) All tanks shall be supported in accordance with the provisions of the Administrative (Building) Code.

All tanks shall be provided with emergency outlets in conformity with Section P107.8(c) of Reference Standard RS-16 of the

Administrative (Building) Code.

(g) Standard one-half inch (1/2") spray type sprinkler heads. Each private hall and room within an apartment having single-room occupancy shall be sprinkled as hereinafter provided. In private halls within apartments, sprinkler heads shall be placed not more than fourteen feet (14') apart. No sprinkler head in a hallway shall be distant more than seven feet (7') from a wall, partition or end of the hall.

No sprinkler protection will be required within any closet with a floor area of not more than 20 square feet provided such closet is within a room and the area of the closet is considered as part of the room area in computing the required number of heads.

(h) The term "protected area" shall be construed to mean that single-room occupancy apartment within the building requiring the greatest number of sprinkler heads. In computing the required number of heads within a "protected area," the number of heads within the same apartment may be used on the condition that there is no connection to another apartment or private hall.

Whenever there is a direct connection between two adjoining apartments, either or both of which are used for single-room occupancy, the combined connected apartments and private halls shall be considered as the "protected area." In computing the required number of heads in a "protected area" of this type, the number of heads within the rooms in the connected apartments or the number of heads required in the private halls of such connected apartments, whichever is greater, shall be used.

(i) The total number of heads in the "protected area" requiring the greatest number of heads shall determine the required size of the main supply, including service mains, main branch, tank, down feed and riser, but in no case shall the size of the main supply be less than two inches.

(j) There shall be sufficient actual water volume to supply 25 percent of the heads in the "protected area" requiring the greatest number of heads for a period of 20 minutes at 20 gallons per minute.

(k) The number of sprinkler heads on a given size of piping shall not exceed the following:

Size of pipe diameters	Maximum number of sprinkler heads allowed
1 inch.....	2 heads
1 1/4 inch.....	3 heads
1 1/2 inch.....	5 heads
2 inch.....	10 heads
2 1/2 inch.....	30 heads
3 inch.....	60 heads
3 1/2 inch.....	100 heads
4 inch.....	Unlimited heads

(l) The sprinkler main shall not be less in size than the sprinkler riser and [*sic*] the check valve of equal diameter to the main and the riser shall be provided on the sprinkler main. For draining the sprinkler system, a 3/4" plugged valve shall be provided on the sprinkler main just inside the aforesaid check valve. All sprinkler piping and fittings shall be so installed that they can be thoroughly drained.

On the sprinkler main, an outside screw and yoke gate valve, readily accessible, must be provided near the front of the front of the building and located so as to control the water supply to all of the interior sprinkler systems. The said outside screw and yoke gate valve must be sealed in an open position.

If tank water supply is used for sprinklers, an outside screw and yoke gate valve shall be provided on the piping leading from the tank to the sprinkler system under conditions similar to those specified for such valves on sprinkler mains.

(m) Sprinkler risers shall not be located close to windows and all sprinkler piping shall be properly supported.

(n) Sprinkler systems shall be maintained for sprinkler use only, and connections to such sprinkler systems for any other purposes are prohibited.

(o) All piping used in sprinkler systems shall be full weight standard steel threaded pipe, well reamed and screwed up tight into fittings without reducing the waterway. Fittings shall be standard cast iron. All fittings placed inside of tank shall be of brass or other non-corroding material.

(p) Sprinkler risers shall be provided at the top for testing purposes, with a connection not less than one inch in diameter, with a valved outlet so located that same will be readily accessible at all times. When not in use, the valve shall be provided with an iron or brass plug screwed in tight.

(q) Sprinkler systems when completed shall be subjected to a hydrostatic test at a pressure of not less than thirty pounds in excess of the normal pressure required for such sprinkler systems when in service, and shall remain uncovered in every part until they have successfully passed the test. The Department of Buildings, in the borough in which the test is to be conducted, shall be notified when such test is to take place. Tests shall be conducted by the contractor or the owner or [*sic*] the owner's representative, in the presence of a representative of the Building Department.

(r) Sprinkler systems shall be inspected at least once in each month by a competent representative of the owner, to ascertain that all parts of the system are in perfect working order. A detailed record of each inspection shall be kept on the premises for examination by the Fire Department, the Department of Housing Preservation and Development, and the Department of Buildings.

(s) There shall be kept available on the premises at all times a sufficient supply of extra sprinkler heads and also a sprinkler

wrench for use to replace promptly any fused or damaged sprinkler heads.

Any head which has opened or has been damaged shall be replaced immediately with a good sprinkler head.

Sprinkler heads shall be of a type and manufacture approved by the Board of Standards and Appeals.

The minimum operating temperature of all sprinkler heads shall be in the ordinary degree range. Appropriate higher degree operating temperatures shall be required in cooking spaces.