



Automatic Sprinklers: Rubbish and Linen Chute Protection

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Learning Objective: The student shall be able to identify the requirements for sprinklers in rubbish and linen chutes.

Today's dramatic eye-catching picture illustrates an important fire protection consideration in multistory buildings: protection of rubbish and linen chutes. Look closely at the right-hand side center of the picture and you will see the deflector of an automatic sprinkler.

Rubbish and linen chutes are found in a variety of occupancies. While they are common in hotels, motels, apartment buildings, and other residential properties, they can occur in almost any multistory building. While these chutes are a convenient way for occupants to dispose of garbage or send dirty linen to a laundry room, they create a potential fire hazard because they are an unobstructed vertical path for fire and smoke.

To minimize the hazard, the model fire and building codes require that automatic sprinklers be installed in the top of the chutes as well as the "terminal room:" the space at the bottom of the chute where the rubbish and linen accumulate.

When the chute extends through three or more floors, additional sprinklers must be installed at alternate floor levels. In the latest editions of NFPA[®] 13, *Standard for the Installation of Sprinkler Systems*, sprinklers must be recessed out of the chute area through which the material travels. Older editions of NFPA[®] 13 allowed sprinklers to be installed in the chute if they were shrouded or otherwise protected from falling materials. In any case, the sprinklers must be accessible for service and replacement. Sprinklers should be of the ordinary temperature classification 135 to 170 °F (57 to 77 °C).

For fire-resistive construction requirements around linen and rubbish chutes, refer to your adopted building code.

For additional information, refer to NFPA[®] 13, *Standard for the Installation of Sprinkler Systems* Chapter 21, NFPA[®] 5000, *Building Construction and Safety Code* Chapter 6, *International Fire Code*[®] Chapter 9, NFPA[®] 1, *Uniform Fire Code*[®] Chapter 13, *International Building Code*[®] Chapter 9, and NFPA[®] 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment*.



Photo courtesy Keith Heckler, P.E., Rockville Fire Department, Maryland.
This laundry chute must be sprinklered to prevent vertical fire spread.

