

Horizontal and Vertical Sliding and Rolling Fire Doors

By Pablo Davis

An often overlooked yet a very important component of a fire rated assembly is the sliding or rolling fire door found in a wide variety of occupancies.



The doors are designed to separate fire areas within a building or protect the means of egress in the event of a fire, thereby limiting its spread.

Sliding fire doors are typically large steel panels hung by rollers on an inclined rail or track. They are common in large industrial occupancies, athletic field houses and gymnasiums, theaters and storage warehouses. Roll down fire doors are usually heavy corrugated metal sections hinged together and running on a track similar to a garage door. They are found in service windows, reception areas, separating occupancies within a building and protecting the means of egress from specific hazards such as elevator shaft ways or loading areas. Both types of doors are gravity operated and their speed is controlled by counterweights. Actuation of these doors is achieved by fusible links located on either side of the door or by tying the release mechanism to an approved detection system.



Sliding and rolling fire doors are usually kept in the open position and are only closed in the event of a fire. Because of this they are often hidden or concealed in ceilings, soffits or walls and building occupants are unaware of their existence and purpose. It is important that furnishings, decorations and materials are not placed or stored in the doors' path of travel, thereby impeding its closure upon activation and rendering it useless. A common example of this can be found in reception areas of dorms or health clinics where the entrance lobby (the means of egress) and the receptionist desk/RA office are separated by a service counter or window. Telephones, pen holders and flower vases are common items found blocking the roll down fire door that protects the opening.

A common impairment to a fire door's operation is damage to or modification of the fusible link, the most common being painting of the link and chain during remodeling or redecorating. It is important that these doors be kept free of obstructions and that their activation mechanisms be maintained in good working order and repair.

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The International Fire Code addresses some maintenance and testing requirements for sliding and rolling fire doors in chapter 7, Fire-Resistance Rated Construction. 703.2 states that opening protectives shall be maintained in an operative condition in accordance with NFPA 80, Standard for Fire Doors and Fire Windows. They cannot be blocked or otherwise made inoperable and fusible links shall be replaced promptly whenever

Inspection and testing of rolling and sliding fire doors can be problematic due to their hidden status. Many fire alarm service companies routinely test actuation mechanisms that are tied to the alarm system but not the actual performance of the door itself due to the fact that they are not familiar with its maintenance or repair needs. Doors that are not tied to an alarm system do not fall under the responsibility of a fire alarm

service company conducting annual testing of an alarm system. It's up to the building owner to find a professional contractor to test these doors. Fenestration vendors and installers are reluctant to test these assemblies as they are generally unfamiliar with the responsibilities and



fused or damaged. Testing requirements are found in 703.4. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and be available to the code enforcement official. The record must indicate the date, time, test method and person conducting the test for each opening protective.

code requirements. The best solution is for the building owner to coordinate testing of the alarm system and rolling and sliding fire doors at the same time. By explaining the need for annual testing and proper operation of these assemblies both contractors can work together to ensure proper operation.

So the next time you perform a walk through fire inspection of your property pay close attention to these hidden guardians of life and property and ensure that they be allowed to perform as intended.



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