

Use of Flush Bolt Hardware on Inactive Leaf Fire Doors

John Jackson, Fire Safety Project Manager

This month's Lessons Learn Bulletin focuses on the requirements for using flush bolt hardware on inactive leaf fire doors.



Lesson Learned Statement: When it comes to labeled inactive leaf fire doors, they are only effective if all elements of the door assemble system are in place and operating properly. The NFPA 80 Standard for Fire Doors and Other Opening Protectives has very specific requirements for the installation and use of inactive leaf fire doors.

Discussion: Over the past several months, Environmental Health and Safety has seen an increase in non-compliant hardware used on inactive fire doors in hazardous areas. As a result, fire barriers have been compromised. When installing inactive leaf doors and utilizing flush bolt hardware, two types of flush bolts are typically used. They are referred to as either manual flush bolts or automatic flush bolts.

So what is the difference?

Manual flush bolts require someone to latch, and unlatch the inactive leaf manually. When not latched the door is considered not positively latched. A typical application is a pair of fire doors on an electrical room. The room is normally non-occupied, but requires the inactive leaf to allow better maintenance access and installation of large equipment.

Automatic flush bolts deploy rods automatically into the door frame header and floor when the active leaf is closed. The rods prevent the inactive leaf from being opened. When the active leaf is opened, the flush bolt rods retract on the inactive leaf allowing both doors to open.

Automatic flush bolt hardware is required on doors separating hazardous areas, such as laboratories. When installed correctly, with the proper coordinator and closer, flush bolts work with the listed single-point of a pair of swinging fire doors to provide the three-point latching on which fire door listing are based. The three most common mistakes found include manual flush bolts used on fire door assemblies, no door coordinator and no door closers.

As a result occupants, are leaving the inactive leaf open to allow access to a space without having to manually operate a door, compromising the fire separation and security of the space. NFPA 80, Section 6.4.4.5.1 2007 Edition allows the use of manual flush bolts where acceptable to the AHJ, **provided they do not pose a hazard to safety of life**. It is recommended that anyone involved in the design or installation of door hardware review the NFPA 80 standard for additional information and requirements.

If you have questions concerning this bulletin or need assistance, please contact Environmental Health and Safety's Fire and Life Safety group at 713-792-2888 or email us at askEHS@mdanderson.org.