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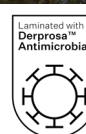
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Ditch the Door Wedge: Here's Why Fire Doors Must Be Unobstructed

Text and photos from dormakaba.

Typically triangle-shaped and made of wood or rubber, door wedges are an inexpensive and ubiquitous ways to maintain an unobstructed people flow. Sometimes, a door wedge can even be an object such as a piece of wood or cardboard. However, in case of a fire, the seemingly innocent door wedge can cause a devastating personal and financial harm.

Why are fire doors necessary?

Every year, despite the use of fire detection systems and smoke detectors, hundreds of thousands of fires wreak havoc on buildings worldwide with devastating consequences. This is why preventive fire safety is so important when planning a building: effective protection saves lives. It's not just fire-resistant doors themselves that play a decisive role, but the door components used to build them. These have to balance building code requirements with functionality and convenience.

In the last decades, the regulations for fireproofing properties have been tightened in both advanced and emerging economies. While fires are not always preventable, there are many effective ways to reduce their risks. A fire door, which aligns with the fire resistance regulations, is amongst the essential solutions that can minimise the consequences of a fire.

Fire doors function by containing a fire in one room and slowing down the spread of smoke or flames. As fires need oxygen to keep burning, properly functioning fire doors deny the oxygen flow for the flames to grow. Hence, as it can be a matter of minutes for flames to engulf a property without fire doors, they are vital to a building's safety strategy.



dormakaba is consistently innovating to refine our fire protection technologies in order to safeguard lives and assets. In the event of a fire, our automatic swing doors, enhanced with the new Inverse Function, operates by pulling in fresh air and redirecting smoke.



Fire doors are certified for safety based on compatible, fire-tested materials and components. Ensuring the door is properly fitted with certified hardware ensures certification remains valid and keeps the door safe.



Not only do these dormakaba's FRX and FPP technologies allow our door closers to comply with standards worldwide, they are also able to meet the highest possible fire rating requirements of up to 4 hours, as tested on uninsulated metal doors to EN1634-1 and SS332:2018.

During a fire, the surface temperature of a door, even the unexposed side, will rise reaching high levels very quickly. dormakaba's patented Fire Protection Plate (FPP) ensures that the door closer body is not affected by this intense heat, eliminating the potential for damage to the fire barrier and reducing the risk of fire and smoke spread through the building. The FRX design, on the other hand, is optimised with a unique hydraulic fluid to offer significantly higher fire resistance.

Cheap door wedges can come with a high price tag

Since fire doors become moot tools when fixed with a wedge that prevents them from ever closing, the inexpensive door wedges can result in high financial and personal costs in case of a fire. Wedged doors are known to cause a "chimney effect" and accelerate the spread.

From a legal perspective, if a facility wedges a fire door open, potentially putting lives at risk,



As an alternative to door wedges, hold-open systems suspend the function of a locking device in a controlled manner, and reliably close permanently open doors in the case of fire.

they could suffer penalties, including high fines and even a prison sentence. Likewise, wedged doors can invalidate insurance.

In 2011, a tragedy as such hit Rosepark Nursing Home in Glasgow, UK. After the blazes took the lives of 14 residents, an inquiry concluded that the disaster was preventable in the facility. Some of the rooms where residents slept had wedged doors, which caused the fires to spread quickly.

"When we inspect care homes we rarely turn up to find there's no fire alarm or fire doors etc; it's how they're managing and dealing with it," said Nick Coombe of London Fire Brigade.



With a team filled with GAI-certified members, dormakaba is able to efficiently deliver to the required specifications and provide excellence in knowledge, products, solutions and services.

Door must reduce fire risks, not increase them

Nevertheless, it's still possible to remain compliant with fire regulations while still facilitating convenient access. Fire doors can be equipped with electrically powered hold-open devices, allowing them to remain open without the need of an external wedge, and automatically close in an emergency.

Depending on the model of the fire door, they might have these systems pre-installed, but it's also possible to retrofit them with battery-operated solutions. An inbuilt smoke detector, ideally connected to the building's central system, can activate the door closer as soon as the alarm goes off.

Given the potentially dire consequences of wedging the fire doors, facility managers must ensure their doors reduce fire risks instead of increasing them. They can achieve this by not only by aligning their doors with fire regulations, but by educating their peers about the dangers of the seemingly innocent door wedges.

Inverse functionality for automatic swing doors

dormakaba has always been working hard in the interest of refining our fire protection technologies in order to safeguard lives and assets. In the event of a fire, our automatic swing doors, with our innovative new Inverse Function, operate by pulling in fresh air, and redirecting smoke to provide an increased layer of fire protection.



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