

FIRE DOORS AND SHUTTERS

What is the hazard?

Fire doors and shutters play a critical role in maintaining the integrity of a fire wall or other type of fire separation. If a fire door or shutter is not closed or fails to close properly, fire and smoke could spread from one fire compartment to another, thereby increasing the property damage and the resulting business interruption.

The fire doors, as part of the fire division walls and thus the fire safety of the building, are also vital in ensuring the safe evacuation of the persons present in the building.



How to reduce the risk

The following applies mainly to industrial and commercial buildings.

The fire door or shutter should have the same fire resistance rating as the fire division wall in question. This rating (e.g. "REI 120") should be indicated on the door or the shutter.

THE FIRE DOORS AND SHUTTERS SHOULD BE MAINTAINED IN GOOD CONDITION

- Adequate documentation should be available showing the fire rating of each fire door or shutter, the type and frequency of inspections with their results and the performance of annual maintenance.
- The annual inspection and maintenance work should be provided and carried out by competent personnel.
- The regular checks of the fire doors and shutters should be made an integral part of the maintenance programme. These checks should cover the physical condition of the door or shutter, its frame and the closing mechanism, and include a test for their proper closing.
- The fire doors and shutters should also be included in the safety inspections.
- Where there is a risk of damage from fork-lift trucks or other traffic, then protection – e.g. suitable steel barriers - should be provided to prevent collision with the door or shutter or its frame.
- If there is a risk that storage items placed against the open fire door or shutter can prevent the door or shutter from closing, then suitable barriers should be provided to ensure that the storage items are kept away from the fire door or shutter.
- Damage to fire doors and shutters should be reported immediately and repaired as soon as possible.

KEEP THE FIRE DOORS OR SHUTTERS CLOSED AT ALL TIMES OR ENSURE THAT THEY CLOSE IN THE EVENT OF A FIRE

- In principle, fire doors or shutters should be kept closed whenever they do not need to be open.
- A fire door or shutter that is kept open should be provided with an automatic closure device, which operates in the event of a fire.
- Fire doors and shutters should never be prevented from closing through the use of wedges, chains or other items or by storage placed in the path of the door.

SMOKE DETECTION PREFERRED TO FUSIBLE LINKS

- If automatic smoke detection systems are installed in the buildings, the automatically closing fire doors and shutters should be interlocked to these so that a fire door or shutter closes when an alarm in the nearest (or some other, chosen by a professional smoke detection expert) fire alarm system is activated.
- Similarly, the fire doors and shutters could be interlocked to automatic sprinkler systems. However, smoke detectors (see below) would be a faster and thus a better alternative.
- Fusible link operated fire doors are ineffective against the spread of smoke. Fusible links should therefore be replaced with smoke detector activation.
- If automatic smoke detection systems are not available in the buildings, the automatically closing fire doors and shutters should preferably be controlled by smoke detectors installed on both sides of the wall. The detectors will allow a mechanism to close the door or shutter when the fire is detected.
- Using fusible links is a less favourable alternative. There is a considerable delay in the activation of a fusible link, especially when it is positioned below the ceiling of the room. During this delay a significant volume of smoke can pass through the doorway.

FIRE DOORS AND SHUTTERS, SMOKE DETECTION AND LOCATION OF DETECTORS

- The best practice is to connect the fire door or shutter to a smoke detection installation on both sides of the door.
- If there is no fire alarm system in place in the area, the single smoke detectors should be placed in accordance with an internationally recognised standard.

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