

- **ROLLER SHUTTERS**
- **STEEL DOORS**

- **ROLL FORMED SECTIONS**
- **MOTORS & COMPONENTS**

SAFETY GUIDANCE FOR ROLLER SHUTTER OR OTHER INDUSTRIAL DOORS

Health and Safety Executive guidance

Industrial, commercial and roller shutter doors pose particular health and safety risks and have been the cause of a number of serious and fatal accidents involving the Health and Safety Executive (HSE), examples of which are given below:

- A man was taken to hospital with fractured ribs when a roller shutter door came down on his chest and pinned him to the back rest of the vehicle he was driving
- An employee was knocked unconscious as he walked through the factory roller shutter door and it closed on him, hitting his head
- Bruises and spinal whiplash were suffered by an employee when a roller shutter door came down on his head, knocking him to the floor
- In several cases, people have been lifted off the floor only to fall three meters or more onto hard concrete
- Two deaths have involved children being lifted up by a roller shutter door and becoming fatally entangled or trapped in the door
- At a distribution centre a forklift truck driver drove under a roller shutter which closed on her, landing heavily on her head, rapping her and breaking her jaw

As a result of this, the HSE has issued the following guidance concerning vertically opening powered rolling doors.

Where a door could be powerful enough to lift an adult or a child, building owners or whoever is responsible for these doors should review their risk assessment to evaluate this hazard and ensure suitable measures are provided.

Where children are likely to have access to a powered rolling door that could lift them, then safety measures must be provided. The European Standard, BS EN 12453:2001 recognises this hazard and recommends the following safeguarding options:

- Preventing anyone from being lifted by/traveling on the door by eliminating handholds and footrests and using suitably sized multiple perforations in slats for vision panels (not letterbox openings)
- Limiting the force available at the door leaf
- Stopping the door movement by protective equipment when any person is lifted and before any part of the person reaches any hazardous locations, e.g. suitably installed photoelectric beams

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- Installing hold to run control in combination with a key switch or similar in the vicinity and full view of the door

The most appropriate safeguard or combination of safeguards should be selected where the risk exists as part of a suitable risk assessment to ensure that the powered rolling shutter door is safe. Retrofit options may be available from the door supplier otherwise a bespoke solution will be required.

If a door is modified or refurbished and this results in significant changes to the control or operation of the door, then the door will have to be CE marked by the person undertaking the modification or refurbishment. Examples of significant alterations that would require CE marking are:

- Addition of automatic control systems
- Addition of safety devices e.g. photoelectric devices
- Significant increases in the voltages of motors or control systems

Examples of non-significant alternations that would not require CE marking are:

- Like for like replacement e.g. same rating of motor
- Fitting a plate to make the bottom rail slope
- Replacing door leaf

Some factors to consider when specifying new doors or modifying existing doors to powered operation are:

- What is the best security solution?
- What is the most suitable type of door?
- What is the primary function/duty of the door?
- Where is the door going to be installed?
- Who is going to use the door?
- How is the door going to be operated?
- What is the frequency of use and speed of operation?
- How is the safety of users to be ensured?
- How is the safety of others who may be in the area ensured?

Before installing any new door, a design risk assessment should be undertaken. This assessment should include any potential risk to members of public, in particular children. The risk is greater where the vertical opening rolling door is the external means of preventing access, e.g. car parks in offices and apartment type buildings. The risk increases with the degree of automation of the roller shutter

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door and is highest where an automatically controlled door is easily accessible by member of public, though any accessible powered door should be assessed. Any potential risk is increased where children are likely to be present.

All new doors or existing doors retrofitted with powered operation must be CE marked showing they comply with the Supply of Machinery Regulations 1992 as amended; doors manufactured in accordance with BS EN 12453:2001 are one means of achieving this.

Where doors form part of the fire control measures the local fire authority and local authority building control should be consulted to ensure they meet relevant standards.

Legislation

The following pieces of legislation are relevant when considering the Council's legal responsibilities with regard to regular planned maintenance of industrial, commercial and roller shutter doors.

Regulation 18 of the Workplace (Health, Safety and Welfare) Regulations 1992

1. Doors and gates shall be suitably constructed (including being fitted with any necessary safety devices).
2. Without prejudice to the generality of paragraph 1, doors and gates shall not comply with that paragraph unless:
 - a. Any sliding door or gate has a device to prevent it coming off its track during use
 - b. Any upward opening door or gate has a device to prevent it falling back
 - c. Any powered door or gate has suitable and effective features to prevent it causing injury by trapping any person
 - d. Where necessary for reasons of health or safety, any powered door or gate can be operated manually unless it opens automatically if the power fails
 - e. Any door or gate which is capable of opening by being pushed from either side is of such a construction as to provide, when closed, a clear view of the space close to both sides

Regulation 5 of the Workplace (Health, Safety and Welfare) Regulations 1992

1. The workplace and equipment, devices and systems to which this regulation applies shall be maintained (including cleaned as appropriate) in an efficient state, in efficient working order and in good repair.*
2. Where appropriate, the equipment, devices and systems to which this regulation applies shall be subject to a suitable system of maintenance.
3. The equipment, devices and systems to which this regulation applies are:

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- Equipment and devices a fault in which is liable to result in a failure to comply with any of these regulations
- Mechanical ventilation systems provided pursuant to regulation 6 (whether or not they include equipment or devices within sub-paragraph *a* of this paragraph)

**examples of equipment and devices which require a system of maintenance include emergency lighting, fencing, fixed equipment used for window cleaning, anchorage points for safety harnesses, devices to limit the opening of windows, powered doors, escalators and moving walkways.*

Regulatory Reform (Fire Safety) Order 2005

“Where necessary in order to safeguard the safety of relevant persons the responsible person must ensure that the premises and any facilities, equipment and devices provided are subject to a suitable system of maintenance and are maintained in an efficient state and efficient working order and in good repair.”

This applies to any door provided as a fire exit along an escape route or which provides fire containment or compartmentation.

BS EN 12635:2003 – Industrial, Commercial and Garage Doors and Gates – Installation and Use

This is one of a series of supporting standards to BS EN 13241-1:2003. It provides guidance on documentation, installation, labelling, handover, operation, use, maintenance and repair of doors, including the requirements for a log book for power operated doors. BS EN 12635 requires that the log book shall contain the following:

- Name and contact details of the manufacturer
- Unique identification number
- Door location reference (if known)
- Name and contact details of the installer
- Date of completion of installation
- The results of installation verification and testing
- Identification of power unit
- Identification of safety devices
- The results.