Is Your Workplace Roller Shutter and Door Compliant?

Essential Guide to Shutter & Door Compliance 2015
Brought To You By
SFG Maintain
Part of the Shopfront Group

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SFG Maintain Ltd
Planned and Reactive Maintenance
Roller Shutters and Doors
Be Safe, Be Compliant
Part of the Shop Front Group

Through Sedex, the Shopfront Group supports the promotion of responsible supply chains worldwide and the abolition of workplace slavery

Be Safe, Be Compliant, Be With SFG

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Are You Shutter & Door Compliant?

Everybody knows it makes sound economic sense to have a scheduled service and maintenance programme for your roller shutters and doors.

After all, who would want the inconvenience of a shutter failing at the start or end of the working day, let alone the cost of an out of hours emergency engineer?

Yet for businesses, schools and institutions it seems that there’s so many more important things to allocate a budget to, and shutters or doors always fall way short of being a priority.

After all, ‘if it ain’t broke don’t fix it, right?’

Unfortunately it’s the wrong viewpoint to take as there are increasing numbers of accidents being reported involving powered roller shutters and doors, and along with the burgeoning numbers of prosecutions for not complying with the legislation laid down by ‘PUWER’ and the ‘Workplace Regulation 1992 Maintenance of Equipment, Devices and Systems’, it could potentially become a Health & Safety nightmare.

In order to assist and bring you up to speed, we’ve put together a brief explanation of what the requirements are to keep you compliant as a work place and also keep your equipment in optimal working condition for maximum life and security.

It can be a little tough going but at SFG Maintain it’s our commitment to keep it as simple and economical as possible for you so that it’s no longer an issue.

So let’s bust one myth wide apart from the start.

“I don’t need to have my shutters and doors checked. That’s for factories and big employers”

So is it a requirement to have your doors and shutters regularly maintained?

And the loud and clear answer is YES... It most definitely is.

It is compulsory to ensure that your roller shutters and doors comply with the Workplace Regulation 1992 Maintenance of Equipment, Devices and Systems.
To comply fully with current regulations you need to ensure that the roller shutters are inspected at least once a year. However, good practice and manufacturer recommendations are for 6-monthly visits in order to effect a true preventative breakdown maintenance programme.

**THIS IS A GUIDE TO YOUR OBLIGATIONS UNDER HEALTH AND SAFETY LAW WITH REGARD TO MAINTENANCE OF INDUSTRIAL, COMMERCIAL DOORS AND ROLLER SHUTTER DOORS.**

The following pieces of legislation are particularly relevant when considering your legal responsibilities with regard to proper regular planned maintenance of industrial, commercial doors and roller shutter doors.

These regulations are binding on the employer or occupier of a building or premises who have a duty to safeguard the health and safety of employees and other persons on or about the premises.

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

*Extract:* “The equipment devices and systems to which this regulation applies shall be subject to a suitable schedule of maintenance.”

This applies to all types of roller shutter doors whether manual or electrical operation.

**Regulation 5 of the Provision and Use of Work Equipment Regulations 1998 (PUWER)**

*Extract A:* “Every employer should ensure that work equipment is maintained in an efficient state and in efficient working order and in good repair.”

*Extract B:* “Every employer should ensure that where any machinery has a maintenance log and the log is kept up to date.”

This applies to all power operated doors.

**Regulatory Reform (Fire Safety) Order 2005**

*Extract:* “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 in 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.
In order to satisfy the above regulations it is important that you can demonstrate:

- That regular maintenance is carried out at suitable intervals.
- That potentially dangerous defects are remedied in a timely fashion.
- That records are kept to document the above.

One method of documentation to demonstrate the above would be a log book.

Requirements for the use of a log book are mentioned above in extract B from PUWER and are further covered by BSEN Standards relating to Construction Products and the Machinery Directives, BS EN 12635:2002 – Industrial, Commercial and Garage Doors and Gates – Installation and Use.

This is one of a series of supporting standards to BSEN 13241-1:2003 the Product Standard for Industrial, Commercial, Roller and Garage Doors and Gates.

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, which are summarised below.

**Requirements for a Log Book.**

BS EN 12635 requires that the log book shall contain the following:

- Name and contact details of the manufacturer (if known)
- 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

The above requirements apply particularly to new installations but are essential information for the continued maintenance and safe operation of any door, no matter how old.
The log book should also contain clear reference to the operating instructions for the door, whether included in the log book or as a reference to separate documentation.

On an ongoing basis, there should be space for the recording of:

- **All maintenance and repair visits.**
- **Details of the work done.**
- **Details of significant changes or upgrades.**
- **Name, date and signature of responsible person in each instance.**

At SFG Maintain, we can assist you in meeting all of these obligations with our programme of 6-monthly service inspection visits.

During these visits a trained engineer will assess the shutter or door against a series of industry recommended checks.

Adjustments and lubrications to facilitate smooth running of the equipment will be carried out at the same time.

Defects, wear and tear or damage will be notified in a separate report and priced accordingly for your decision.

Following each visit you will receive an electronic report of the checks carried out plus any defects reported.

We will also provide you with a service log book so that you can print them out and keep them safely stored in one folder, gradually building up a history of service and repair that would pass any audit with flying colours.

SFG Maintain is the Planned Maintenance division of the Shopfront Group Ltd, manufacturers and installers of aluminium shop fronts, roller shutters, fire shutters, glazed structures and bespoke glazing solutions.

We serve many schools, institutions and businesses up and down the UK and have many well-known and prestigious high street names as our customers, so we are well established and trusted.
Not only can we offer planned maintenance but should any of your equipment come to the end of its useful life, or meet with an accident or unwanted damage, our manufacturing facility has the capability of reproducing your exact requirements with a fast turnaround.

We are a friendly and helpful organization and would be delighted to hear from you to discuss your maintenance requirements, so please contact us.

Kindest regards

Paul Chatwin
Planned maintenance manager

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Disclaimer.

Every attempt has been made within this publication to be as accurate as possible and to interpret the law as it stands today.

However, laws change with little notice and due to the viral nature of the internet the law may be different depending on when and in which country you are reading this.

The author or company/companies promoting this publication cannot be held responsible for any inaccuracy within this report. It is your own responsibility to check the accuracy of the information before basing any decisions on the information contained.

Thank you.
The rest of the report contains the following:-
HSE Guide ~ A Brief Guide To PUWER. Provision and Use of Work Equipment Regulations
Safety Guidance for Roller Shutters or Other Industrial Doors. (A brief safety guide originally issued by the Door and Hardware Federation.)
Workplace health, safety and welfare
A short guide for managers

Introduction

The Workplace (Health, Safety and Welfare) Regulations 1992 cover a wide range of basic health, safety and welfare issues and apply to most workplaces (with the exception of those workplaces involving construction work on construction sites, those in or on a ship, or those below ground at a mine). They are amended by the Quarries Regulations 1999, the Health and Safety (Miscellaneous Amendments) Regulations 2002, the Work at Height Regulations 2005, and the Construction (Design and Management) Regulations 2007.

This leaflet gives a brief outline of the requirements of the Workplace Regulations.

Requirements under these Regulations

Employers have a general duty under section 2 of the Health and Safety at Work etc Act 1974 to ensure, so far as is reasonably practicable, the health, safety and welfare of their employees at work. People in control of non-domestic premises have a duty (under section 4 of the Act) towards people who are not their employees but use their premises. The Regulations expand on these duties and are intended to protect the health and safety of everyone in the workplace, and ensure that adequate welfare facilities are provided for people at work.

These Regulations aim to ensure that workplaces meet the health, safety and welfare needs of all members of a workforce, including people with disabilities. Several of the Regulations require things to be ‘suitable’. Regulation 2(3) makes it clear that things should be suitable for anyone. This includes people with disabilities. Where necessary, parts of the workplace, including in particular doors, passageways, stairs, showers, washbasins, lavatories and workstations, should be made accessible for disabled people.

Interpretation

‘Workplace’ - these Regulations apply to a very wide range of workplaces, not only factories, shops and offices but also, for example, schools, hospitals, hotels and places of entertainment. The term workplace also includes the common parts of shared buildings, private roads and paths on industrial estates and business parks, and temporary worksites (except workplaces involving construction work on construction sites).

‘Work’ - means work as an employee or self-employed person.

‘Premises’ - means any place including an outdoor place.
‘Domestic premises’ - means a private dwelling. These Regulations do not apply to domestic premises, and exclude homeworkers. However, they do apply to hotels, nursing homes and to parts of workplaces where ‘domestic’ staff are employed, such as the kitchens of hostels.

‘Disabled person’ - has the meaning given by section 1 of the Disability Discrimination Act 1995.

**Health**

The measures outlined in this section contribute to the general working environment of people in the workplace.

**Ventilation**

Workplaces need to be adequately ventilated. Fresh, clean air should be drawn from a source outside the workplace, uncontaminated by discharges from flues, chimneys or other process outlets, and be circulated through the workrooms.

Ventilation should also remove and dilute warm, humid air and provide air movement which gives a sense of freshness without causing a draught. If the workplace contains process or heating equipment or other sources of dust, fumes or vapours, more fresh air will be needed to provide adequate ventilation.

Windows or other openings may provide sufficient ventilation but, where necessary, mechanical ventilation systems should be provided and regularly maintained.

**Temperatures in indoor workplaces**

Environmental factors (such as humidity and sources of heat in the workplace) combine with personal factors (such as the clothing a worker is wearing and how physically demanding their work is) to influence what is called someone’s ‘thermal comfort’.

Individual personal preference makes it difficult to specify a thermal environment which satisfies everyone. For workplaces where the activity is mainly sedentary, for example offices, the temperature should normally be at least 16 °C. If work involves physical effort it should be at least 13 °C (unless other laws require lower temperatures).

**Work in hot or cold environments**

The risk to the health of workers increases as conditions move further away from those generally accepted as comfortable. Risk of heat stress arises, for example, from working in high air temperatures, exposure to high thermal radiation or high levels of humidity, such as those found in foundries, glass works and laundries. Cold stress may arise, for example, from working in cold stores, food preparation areas and in the open air during winter.

Assessment of the risk to workers’ health from working in either a hot or cold environment needs to consider both personal and environmental factors. Personal factors include body activity, the amount and type of clothing, and duration of exposure. Environmental factors include ambient temperature and radiant heat; and if the work is outside, sunlight, wind velocity and the presence of rain or snow.
Actions arising from your assessment may include:

- introducing engineering measures to control the thermal effects in a workplace environment, for example heat effects, may involve insulating any plant which acts as a radiant heat source, thereby improving air movement, increasing ventilation rates and maintaining the appropriate level of humidity. The radiant heat effects of the sun on indoor environments can be addressed either by orientating the building so that it doesn’t suffer from the effects of solar loading, or where this is not possible, by the use of blinds or shutters on windows. Where workers are exposed to cold and it is not reasonably practicable to avoid exposure you should consider, for example, using cab heaters in fork-lift trucks in cold stores;
- restriction of exposure by, for example, re-organising tasks to build in rest periods or other breaks from work. This will allow workers to rest in an area where the environment is comfortable and, if necessary, to replace bodily fluids to combat dehydration or cold. If work rates cause excessive sweating, workers may need more frequent rest breaks and a facility for changing into dry clothing;
- medical pre-selection of employees to ensure that they are fit to work in these environments;
- use of suitable personal protective clothing (which may need to be heat resistant or insulating, depending on whether the risk is from heat or cold);
- acclimatisation of workers to the environment in which they work, particularly for hot environments;
- training in the precautions to be taken; and
- supervision, to ensure that the precautions identified by the assessment are taken.

Further advice on thermal comfort in the workplace can be found on HSE’s website at: www.hse.gov.uk/temperature/thermal

**Lighting**

Lighting should be sufficient to enable people to work and move about safely. If necessary, local lighting should be provided at individual workstations and at places of particular risk such as crossing points on traffic routes. Lighting and light fittings should not create any hazard.

Automatic emergency lighting, powered by an independent source, should be provided where sudden loss of light would create a risk.

**Cleanliness and waste materials**

Every workplace and the furniture, furnishings and fittings should be kept clean and it should be possible to keep the surfaces of floors, walls and ceilings clean. Cleaning and the removal of waste should be carried out as necessary by an effective method. Waste should be stored in suitable receptacles.

**Room dimensions and space**

Workrooms should have enough free space to allow people to move about with ease. The volume of the room when empty, divided by the number of people normally working in it, should be at least 11 cubic metres. All or part of a room over 3.0 m high should be counted as 3.0 m high. 11 cubic metres per person is a minimum and may be insufficient depending on the layout, contents and the nature of the work.
Workstations and seating

Workstations should be suitable for the people using them and for the work they do. People should be able to leave workstations swiftly in an emergency. If work can or must be done sitting, seats which are suitable for the people using them and for the work they do should be provided. Seating should give adequate support for the lower back, and footrests should be provided for workers who cannot place their feet flat on the floor.

Safety

Maintenance

The workplace, and certain equipment, devices and systems should be maintained in efficient working order (efficient for health, safety and welfare). Such maintenance is required for mechanical ventilation systems; equipment and devices which would cause a risk to health, safety or welfare if a fault occurred; and equipment and devices intended to prevent or reduce hazard.

The condition of the buildings needs to be monitored to ensure that they have appropriate stability and solidity for their use. This includes risks from the normal running of the work process (e.g. vibration, floor loadings) and foreseeable risks (e.g. fire in a cylinder store).

Floors and traffic routes

‘Traffic route’ means a route for pedestrian traffic, vehicles, or both, and includes any stairs, fixed ladder, doorway, gateway, loading bay or ramp.

There should be sufficient traffic routes, of sufficient width and headroom, to allow people and vehicles to circulate safely with ease.

Horizontal swinging barriers used as gates at car park or similar entrances should be locked open or locked shut (preferably by padlock) so that they do not swing open and constitute a risk to oncoming vehicles. This guidance also relates to duties under the requirements of the Regulations covering doors and gates.

To allow people and vehicles to move safely, the best approach is to keep vehicles and pedestrians apart by ensuring that they use entirely separate routes. If people and vehicles have to share a traffic route, use kerbs, barriers or clear markings to designate a safe walkway and, where pedestrians need to cross a vehicle route, provide clearly marked crossing points with good visibility, bridges or subways. Make sure the shared route is well lit.

It is often difficult for drivers to see behind their vehicle when they are reversing; as far as possible, plan traffic routes so that drivers do not need to reverse. This can be achieved by using one-way systems and drive-through loading areas.

Set appropriate speed limits, and make sure they, and any other traffic rules, are obeyed. Provide route markings and signs so that drivers and pedestrians know where to go and what rules apply to their route, so they are warned of any potential hazards.

Loading bays should have at least one exit point from the lower level, or a refuge should be provided to avoid people being struck or crushed by vehicles.
Where a load is tipped into a pit or similar place, and the vehicle is liable to fall into it, barriers or portable wheel stops should be provided at the end of the traffic route.

Floors and traffic routes should be sound and strong enough for the loads placed on them and the traffic expected to use them. The surfaces should not have holes or be uneven or slippery, and should be kept free of obstructions and from any article or substance which may cause a person to slip, trip or fall.

Criteria for defects such as subsidence, unevenness, pot holes, collection of surface water, cracks and ruts should be determined and set, and maintenance systems developed to undertake repair when these limits are exceeded.

Open sides of staircases should be fenced with an upper rail at 900 mm or higher, and a lower rail. A handrail should be provided on at least one side of every staircase, and on both sides if there is a particular risk. Additional handrails may be required down the centre of wide staircases. Access between floors should not be by ladders or steep stairs.

Falls into dangerous substances

The consequences of falling into dangerous substances are so serious that a high standard of protection is required. Dangerous substances in tanks, pits or other structures should be securely fenced or covered. Traffic routes associated with them should also be securely fenced.

Duties to prevent falls from height in general are covered by the Work at Height Regulations 2005 (see Further reading).

Transparent or translucent doors, gates or walls and windows

Windows, transparent or translucent surfaces in walls, partitions, doors and gates should, where necessary for reasons of health and safety, be made of safety material or be protected against breakage. If there is a danger of people coming into contact with it, it should be marked or incorporate features to make it apparent.

Employers will need to consider whether there is a foreseeable risk of people coming into contact with glazing and being hurt. If this is the case, the glazing will need to meet the requirements of the Regulations.

Windows

Openable windows, skylights and ventilators should be capable of being opened, closed or adjusted safely and, when open, should not pose any undue risk to anyone.

Windows and skylights should be designed so that they may be cleaned safely. When considering if they can be cleaned safely, account may be taken of equipment used in conjunction with the window or skylight or of devices fitted to the building.

Doors and gates

Doors and gates should be suitably constructed and fitted with safety devices if necessary.
Doors and gates which swing both ways and conventionally hinged doors on main traffic routes should have a transparent viewing panel.

Power-operated doors and gates should have safety features to prevent people being struck or trapped and, where necessary, should have a readily identifiable and accessible control switch or device so that they can be stopped quickly in an emergency.

Upward-opening doors or gates need to be fitted with an effective device to prevent them falling back. Provided that they are properly maintained, counterbalance springs and similar counterbalance or ratchet devices to hold them in the open position are acceptable. Powered vertical opening doors that are powerful enough to lift an adult or child should be fitted with measures to prevent this.

**Escalators and moving walkways**

Escalators and moving walkways should function safely, be equipped with any necessary safety devices, and be fitted with one or more emergency stop controls which are easily identifiable and readily accessible.

**Welfare**

**Sanitary conveniences and washing facilities**

Suitable and sufficient sanitary conveniences and washing facilities should be provided at readily accessible places. They and the rooms containing them should be kept clean and be adequately ventilated and lit. Washing facilities should have running hot and cold or warm water, soap and clean towels or other means of cleaning or drying. If required by the type of work, showers should also be provided. Men and women should have separate facilities unless each facility is in a separate room with a lockable door and is for use by only one person at a time.

**Drinking water**

An adequate supply of high-quality drinking water, with an upward drinking jet or suitable cups, should be provided. Water should only be provided in refillable enclosed containers where it cannot be obtained directly from a mains supply. The containers should be refilled at least daily (unless they are chilled water dispensers where the containers are returned to the supplier for refilling). Bottled water/water dispensing systems may still be provided as a secondary source of drinking water. Drinking water does not have to be marked unless there is a significant risk of people drinking non-drinking water.

**Accommodation for clothing and facilities for changing**

Adequate, suitable and secure space should be provided to store workers’ own clothing and special clothing. As far as is reasonably practicable the facilities should allow for drying clothing. Changing facilities should also be provided for workers who change into special work clothing. The facilities should be readily accessible from workrooms and washing and eating facilities, and should ensure the privacy of the user, be of sufficient capacity, and be provided with seating.
Facilities for rest and to eat meals

Suitable and sufficient, readily accessible rest facilities should be provided.

Seats should be provided for workers to use during breaks. These should be in a place where personal protective equipment need not be worn. Rest areas or rooms should be large enough and have sufficient seats with backrests and tables for the number of workers likely to use them at any one time, including suitable access and seating which is adequate for the number of disabled people at work.

Where workers regularly eat meals at work, suitable and sufficient facilities should be provided for the purpose. Such facilities should also be provided where food would otherwise be likely to be contaminated.

Work areas can be counted as rest areas and as eating facilities, provided they are adequately clean and there is a suitable surface on which to place food.

Where provided, eating facilities should include a facility for preparing or obtaining a hot drink. Where hot food cannot be obtained in or reasonably near to the workplace, workers may need to be provided with a means for heating their own food (eg microwave oven).

Canteens or restaurants may be used as rest facilities provided there is no obligation to purchase food.

Suitable rest facilities should be provided for pregnant women and nursing mothers. They should be near to sanitary facilities and, where necessary, include the facility to lie down.

From 1 July 2007, it has been against the law to smoke in virtually all enclosed public places and workplaces in England, including most work vehicles. Similar legislation exists in Scotland and Wales. Further information is available at: www.smokefreeengland.co.uk.

Further reading


Note: The Regulations contained in this Approved Code of Practice have been amended by the Quarries Regulations 1999, the Health and Safety (Miscellaneous Amendments) Regulations 2002, the Work at Height Regulations 2005, and the Construction (Design and Management) Regulations 2007.


Disability Rights Commission’s Code of Practice on Employment and Occupation available from the Commission’s website at: www.drc-gb.org


Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This leaflet is available in priced packs of 15 from HSE Books, ISBN 978 0 7176 6277 7. Single free and a web version can be found at: www.hse.gov.uk/pubns/indg244.pdf.

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Providing and using work equipment safely
A brief guide

Introduction

This leaflet provides an outline of the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER) and describes what you, as an employer, may need to do to protect your employees in the workplace. It will also be useful to employees and their representatives.

There may be particular requirements on the equipment you use at work; where this is the case the leaflet will point you towards further information you may need.

What equipment is covered by the Regulations?

Generally, any equipment which is used by an employee at work is covered, for example hammers, knives, ladders, drilling machines, power presses, circular saws, photocopiers, lifting equipment (including lifts), dumper trucks and motor vehicles. Similarly, if you allow employees to provide their own equipment then it will also be covered by PUWER and you will need to make sure it complies.

Examples of uses of equipment which are covered by the Regulations include starting or stopping the equipment, repairing, modifying, maintaining, servicing, cleaning and transporting.

Do the Regulations apply to me?

If you are an employer or self-employed person and you provide equipment for use at work, or if you have control of the use of equipment, then the Regulations will apply to you.

They do not apply to equipment used by the public, for example compressed-air equipment used in a garage forecourt. However, such circumstances are covered by the Health and Safety at Work etc Act 1974 (HSW Act).

The Regulations cover workplaces where the HSW Act applies – this includes factories, offshore installations, offices, shops, hospitals, hotels, places of entertainment etc. PUWER also applies in common parts of shared buildings and temporary places of work such as construction sites.

While the Regulations cover equipment used by people working from home, they do not apply to domestic work in a private household.
What do the Regulations require me to do?

You must ensure that the work equipment you provide meets the requirements of PUWER. You should ensure that it is:

- **suitable** for use, and for the purpose and conditions in which it is to be used;
- **maintained** in a safe condition for use so that people's health and safety is not at risk; and
- **inspected**, in certain circumstances, to ensure that it is and continues to be safe for use. Any inspection should be carried out by a competent person (this could be an employee if they have the necessary skills, knowledge and experience to perform the task) and a record kept until the next inspection.

You should also ensure that risks created by using the equipment are eliminated where possible or controlled as far as reasonably practicable by:

- taking appropriate ‘**hardware**’ measures, eg providing suitable guards, protection devices, markings and warning devices, system control devices (such as emergency stop buttons) and personal protective equipment; and
- taking appropriate ‘**software**’ measures such as following safe systems of work (eg ensuring maintenance is only performed when equipment is shut down etc), and providing adequate information, instruction and training about the specific equipment.

A combination of these measures may be necessary depending on the requirements of the work, your assessment of the risks involved, and the practicability of such measures.

Machinery

**Why is machinery safety important?**

Working with machinery can be dangerous because moving machinery can cause injuries in many ways:

- People can be hit and injured by moving parts of machinery or ejected material. Parts of the body can also be drawn into or trapped between rollers, belts and pulley drives.
- Sharp edges can cause cuts and severing injuries, sharp-pointed parts can stab or puncture the skin, and rough surface parts can cause friction or abrasion.
- People can be crushed both between parts moving together or towards a fixed part of the machine, wall or other object, and two parts moving past one another can cause shearing.
- Parts of the machine, materials and emissions (such as steam or water) can be hot or cold enough to cause burns or scalds and electricity can cause electrical shock and burns.
- Injuries can also occur due to machinery becoming unreliable and developing faults due to poor or no maintenance or when machines are used improperly through inexperience or lack of training.

**Before you start**

Before allowing someone to start using any machine you need to think about what risks there are and how these can be managed. You should:

- Check that it is complete, with all safeguards fitted, and free from defects. The term ‘safeguard’ includes guards, interlocks, two-hand controls, light guards,
pressure-sensitive mats etc. By law, the supplier must provide the right safeguards and inform buyers of any risks (‘residual risks’) that users need to be aware of and manage because they could not be designed out.

- Produce a safe system of work for using and maintaining the machine. Maintenance may require the inspection of critical features where deterioration would cause a risk. Also look at the residual risks identified by the manufacturer in the information/instructions provided with the machine and make sure they are included in the safe system of work.

- Ensure every static machine has been installed properly and is stable (usually fixed down) and is not in a location where other workers, customers or visitors may be exposed to risk.

- Choose the right machine for the job.

Note that new machines should be CE marked and be supplied with a Declaration of Conformity and instructions in English.

Make sure the machine is:

- safe for any work that has to be done when setting up, during normal use, when clearing blockages, when carrying out repairs for breakdowns, and during planned maintenance;
- properly switched off, isolated or locked-off before taking any action to remove blockages, clean or adjust the machine.

Also, make sure you identify and deal with the risks from:

- electrical, hydraulic or pneumatic power supplies;
- badly designed safeguards. These may be inconvenient to use or easily overridden, which could encourage your workers to risk injury and break the law. If they are, find out why they are doing it and take appropriate action to deal with the reasons/causes.

**Preventing access to dangerous parts**

Think about how you can make a machine safe. The measures you use to prevent access to dangerous parts should be in the following order. In some cases it may be necessary to use a combination of these measures:

- Use fixed guards (eg secured with screws or nuts and bolts) to enclose the dangerous parts, whenever practicable. Use the best material for these guards – plastic may be easy to see through but may easily be damaged. Where you use wire mesh or similar materials, make sure the holes are not large enough to allow access to moving parts.
- If fixed guards are not practicable, use other methods, eg interlock the guard so that the machine cannot start before the guard is closed and cannot be opened while the machine is still moving. In some cases, trip systems such as photoelectric devices, pressure-sensitive mats or automatic guards may be used if other guards are not practicable.
- Where guards cannot give full protection, use jigs, holders, push sticks etc if it is practicable to do so.
- Control any remaining risk by providing the operator with the necessary information, instruction, training, supervision and appropriate safety equipment.

**Other things you should consider**

- Adequate training should ensure that those who use the machine are competent to use it safely. This includes ensuring they have the correct skills,
knowledge, experience and risk awareness, and are physically suited to the task. Sometimes formal qualifications are needed, eg for chainsaw operators.

- Ensure control switches are clearly marked to show what they do.
- Have emergency stop controls where necessary, eg mushroom-head push buttons within easy reach.
- Make sure operating controls are designed and placed to avoid accidental operation and injury, use two-hand controls where necessary and shroud start buttons and pedals.
- Do not let unauthorised, unqualified or untrained people use machinery – never allow children to operate or help at machines. Some workers, eg new starters, young people or those with disabilities, may be particularly at risk and need instruction, training and supervision.
- If machines are controlled by programmable electronic systems, changes to any programmes should be carried out by a competent person (someone who has the necessary skills, knowledge and experience to carry out the work safely). Keep a record of such changes and check they have been made properly.
- Ensure the work area around the machine is kept clean and tidy, free from obstructions or slips and trips hazards, and well lit.

**Mobile work equipment**

In addition to these general requirements which apply to all work equipment, Part III of PUWER contains specific duties regarding mobile work equipment, for example fork-lift trucks and dumper trucks.

You should ensure that where mobile work equipment is used for carrying people, it is suitable for this purpose. Measures should be taken to reduce the risks (eg from it rolling over) to the safety of the people being carried, the operator and anyone else.

**Power presses**

Part IV of the Regulations also contains specific requirements regarding power presses. In particular, you should have a power press, and associated guard or protection device, thoroughly examined at specified intervals and inspected daily when it is in use to ensure that it is safe. This work should only be performed by a competent person and records should be kept.

**Dos and don'ts of machinery safety**

As the dutyholder you should ensure that all employees likely to use machinery understand and follow these dos and don’ts:

**Do…**
- ✔ check the machine is well maintained and fit to be used, ie appropriate for the job, working properly and all the safety measures are in place – guards, isolators, locking mechanisms, emergency off switches etc;
- ✔ use the machine properly and in accordance with the manufacturer’s instructions;
- ✔ make sure employees are wearing the appropriate protective clothing and equipment, required for that machine, such as safety glasses, hearing protection and safety shoes;
- ✔ ensure that those who use machinery are competent to use it safely, provide training where necessary. For some machinery a formal qualification is needed.

**Don’t…**
- ✗ use a machine or appliance that has a danger sign or tag attached to it. Danger signs should only be removed by an authorised person who is satisfied that the machine or process is now safe;
remove any safeguards, even if their presence seems to make the job more difficult;
× wear dangling chains, loose clothing, rings or have loose long hair that could get caught up in moving parts;
× distract people who are using machines.

Plant and equipment maintenance

Why is maintenance of plant and equipment important?

Additional hazards can occur when plant and equipment becomes unreliable and develops faults. Maintenance allows these faults to be diagnosed early, to manage any risks. However, maintenance needs to be correctly planned and carried out. Unsafe maintenance has caused many fatalities and serious injuries either during the maintenance or to those using badly maintained or wrongly maintained/repairs equipment.

An effective maintenance programme will make plant and equipment more reliable. Fewer breakdowns will mean less dangerous contact with machinery is required, as well as having the cost benefits of better productivity and efficiency.

The Provision and Use of Work Equipment Regulations 1998 require work equipment and plant to be maintained so that it remains safe and that the maintenance operation is carried out safely.

What do I have to do?

If you are an employer and you provide equipment for use (such as hammers, knives and ladders or electrical power tools and larger plant), you need to demonstrate that you have arrangements in place to make sure it is maintained in a safe condition.

Think about what hazards can occur:

■ if tools break during use;
■ if machinery starts up unexpectedly;
■ if there is contact with materials that are normally enclosed within the machine, ie caused by leaks/breakage/ejection etc.

Failing to correctly plan and communicate clear instructions and information before starting maintenance can lead to confusion and can cause accidents. This can be a particular problem if maintenance is carried out during normal production work or where there are contractors who are unfamiliar with the site.

Extra care is also required if maintenance involves:

■ working at height or doing work that requires access to unusual parts of the building;
■ entering vessels or confined spaces where there may be toxic materials or a lack breathable of air.

How can I do it?

Establishing a planned maintenance programme may be a useful step towards reducing risk, as well as having a reporting procedure for workers who may notice problems while working on machinery.
Some items of plant and equipment may have safety-critical features where deterioration would cause a risk. You must have arrangements in place to make sure the necessary inspections take place.

But there are other steps to consider:

**Before you start maintenance**
- Decide if the work should be done by specialist contractors. Never take on work for which you are not competent or not prepared.
- Plan the work carefully before you start, ideally using the manufacturer’s maintenance instructions, and produce a safe system of work. This will reduce the risks and avoid unforeseen delays.
- Make sure maintenance staff are competent and have appropriate clothing and equipment.
- Try and use downtime for maintenance. You can avoid the difficulties in co-ordinating maintenance and lost production if maintenance work is performed before start-up or during shutdown periods.

**Safe working areas**
- You must provide safe access and a safe place of work.
- Don’t just focus on the safety of maintenance workers – take the necessary precautions to ensure the safety of others who may be affected by their work, eg other employees or contractors working nearby.
- Set up signs and barriers and position people at key points if they are needed to keep other people out.

**Safe plant and equipment**
- Plant and equipment must be made safe before maintenance starts.

**Safe isolation**
- Ensure moving plant has stopped and that it is isolated from electrical and other power supplies. Most maintenance should be carried out with the power off. If the work is near uninsulated, overhead electrical conductors, eg close to overhead travelling cranes, cut the power off to these first.
- Lock off machines if there is a chance the power could be accidentally switched back on.
- Isolate plant and pipelines containing pressured fluid, gas, steam or hazardous material. Lock off isolating valves.

**Other factors you need to consider**
- Release any stored energy, such as compressed air or hydraulic pressure that could cause the machine to move or cycle.
- Support parts of plant that could fall, eg support the blades of down-stroking bale cutters and guillotines with blocks.
- Allow components that operate at high temperatures time to cool.
- Place mobile plant in neutral gear, apply the brake and chock the wheels.
- Safely clean out vessels containing flammable solids, liquids, gases or dusts, and check them before hot work is carried out, to prevent explosions. You may need specialist help and advice to do this safely.
- Avoid entering tanks, vessels or confined spaces where possible. These spaces can have additional hazards due to the atmosphere or risks of fire etc. If required, get specialist help to ensure adequate precautions are taken.
- Clean and check vessels containing toxic materials before work starts. If required, get specialist help to ensure adequate precautions are taken.
- Ensure that those who are doing the maintenance are competent to carry out the work. You may need to provide training to ensure that competence.
Do…

✔ ensure maintenance is carried out by a competent person (someone who has the necessary skills, knowledge and experience to carry out the work safely);
✔ maintain plant and equipment regularly – use the manufacturer’s maintenance instructions as a guide, particularly if there are safety-critical features;
✔ have a procedure that allows workers to report damaged or faulty equipment;
✔ provide the proper tools for the maintenance person;
✔ schedule maintenance to minimise the risk to other workers and the maintenance person wherever possible;
✔ make sure maintenance is done safely, that machines and moving parts are isolated or locked and that flammable/explosive/toxic materials are dealt with properly.

Don’t…

✘ ignore maintenance;
✘ ignore reports of damaged or unsafe equipment;
✘ use faulty or damaged equipment.

How do the Regulations relate to other health and safety legislation?

The requirements of the Regulations need to be considered alongside other health and safety law, eg section 2 of the HSW Act requires all employers to ensure, so far as is reasonably practicable, the health, safety and welfare of all their employees and the Management of Health and Safety at Work Regulations 1999 contain duties for carrying out a risk assessment and identify measures to eliminate, or reduce, the risks presented by the particular hazards in your workplace. Guidance on how to do this can be found on HSE’s risk management web pages www.hse.gov.uk/risk/.

Other more specific legislation may also apply, for example:

- the Workplace (Health, Safety and Welfare) Regulations 1992, which cover, for example, workplace risks to pedestrians from vehicles;
- the Construction (Design and Management) Regulations 2007 which contain, for example, specific requirements relating to certain types of work equipment such as scaffolding;
- the Supply of Machinery (Safety) Regulations 2008, as amended, which require that machinery:
  - is safe when supplied (‘safe’ refers to risks to both safety and health);
  - comes with a Declaration of Conformity and user instructions in English; and
  - is CE marked.

These requirements also apply to interchangeable equipment, safety components placed independently on the market, lifting accessories, chains, ropes and webbing, removable transmission devices and partly completed machinery.

Generally, if you are meeting the requirements of more specific legislation such as those outlined above, it should normally be sufficient to meet the more general requirements of PUWER.
Find out more


Workplace health, safety and welfare: A short guide for managers Leaflet INDG244(rev2) HSE Books 2007 www.hse.gov.uk/pubns/indg244.htm


Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

This leaflet is available at www.hse.gov.uk/pubns/indg291.htm.

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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 metres 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, trapping 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 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/travelling 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
- 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 alterations 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 a 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 door and is highest where an automatically controlled door is easily accessible by members 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:
   a) Equipment and devices a fault in which is liable to result in a failure to comply with any of these regulations
   b) 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 in 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 12635:2002 – Industrial, Commercial and Garage Doors and Gates – Installation and Use
This is one of a series of supporting standards to BSEN 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