



AUTOMATIC RISING ARM BARRIERS



GUIDANCE FOR **INSTALLERS**

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RISING ARM BARRIERS

What are they

Rising arm barriers, are also known as automated barriers, car park barriers and boom barriers.

This type of barrier can also be fitted with a 'skirt' below and / or above the arm. Barriers featuring skirts should only be operated by a guard / deadman operation or have laser or light curtains fitted for safety.

They are generally installed in applications where there is an anticipated high flow of traffic, such as car parks. Alternatively, an automated barrier may be in operation during the day time but during night time hours when the flow of traffic is reduced, an automated gate may assume responsibility for access control / security.

Where and when are they used

Automated barriers feature regularly in car parks, where access control might be combined with revenue collection. They may also be used in high security sites.

What are the safety requirements for a rising arm barrier?

BS EN12453 states that barriers can be excluded from the requirements of the regulations if they are only used by vehicles and not pedestrians. This is often cited as a reason to justify why barriers should not be regulated, but in reality there are very few barriers that the general public could not come into contact with, the exception to this might be toll barriers on a motorway, railway crossing barriers are covered by separate legislation. Gate Safe takes the view that since all barriers are capable of causing injury to members of the general public unless they are properly protected, all barriers should be subject to the regulations as any other gate.



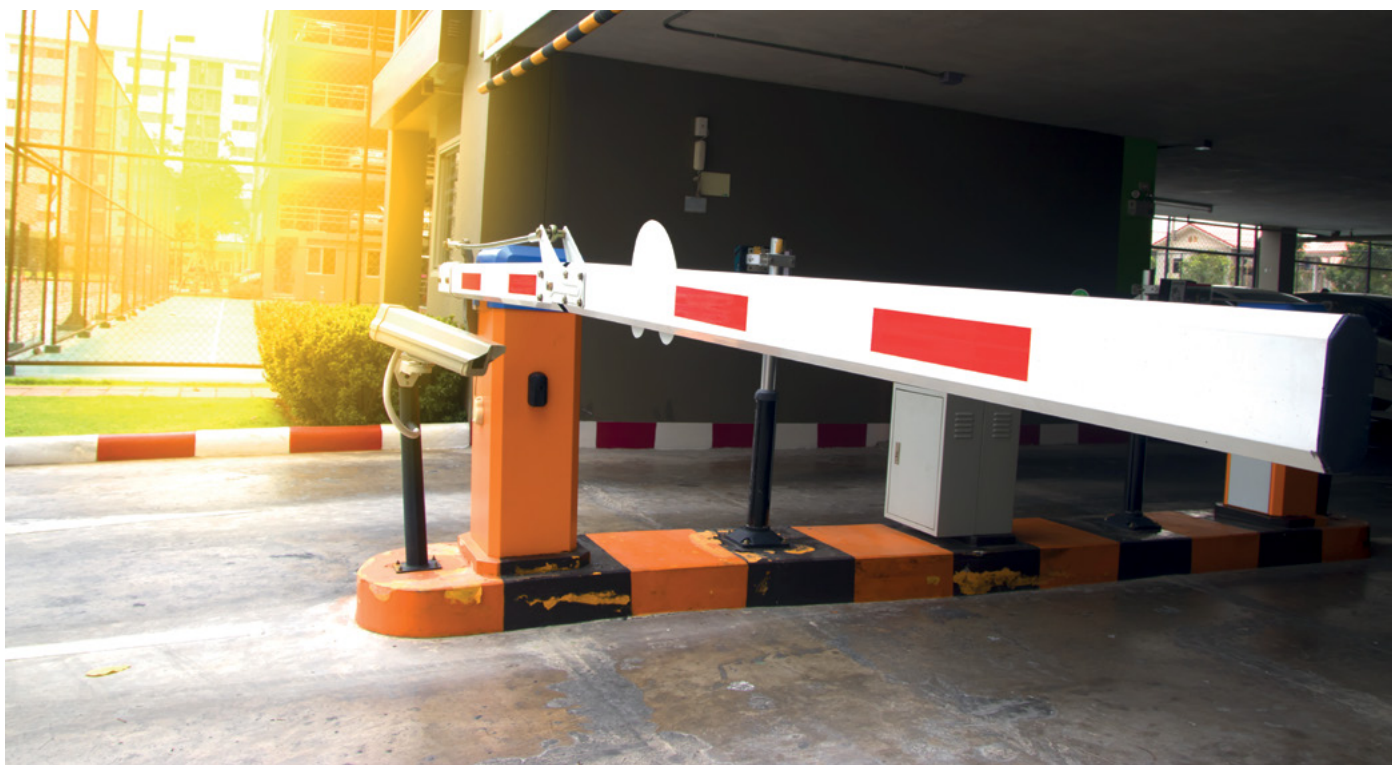
What risks are associated with rising arm barriers:

The risks from barriers are many and varied depending on the style and design of the device, but the following are the key hazards associated with this type of installation:

1. Risk of impact as the barrier arm lowers. The risk here is that a pedestrian may not be aware that there is an arm about to lower. This can be mitigated by:

- fitting two pairs of photocells/light curtains either side of the boom, far enough back to protect a counter balance if fitted
- fitting a laser scanner
- fitting a pressure edge to the underside of the boom
- installing fencing to segregate vehicles and pedestrians

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2. Risk of pinching, crushing and entrapment between the barrier and the housing. This risk can be protected against by installing the safety measures detailed above. It is also possible to effectively 'fence off' or guard access to the housing.

3. Where a counter balance is fitted, as the barrier lowers there is a risk of pinching, crushing and entrapment. This can be protected against by fitting the safety measures recommended for mitigating the risk of impact detailed in point 1 above.

4. Risk of being hit by the barrier as it is raised. Protection can be provided by photocells. In addition, all barriers should be adjusted so that they operate at the minimum force to open and close, which should hopefully be insufficient to be able to lift a person

5. Risk of becoming trapped in the skirt of the rising arm barrier as it is raised. Photocells/light curtains will help to protect against this risk to a degree, but a laser or light curtain may be a better solution if the barrier is in a high risk situation

As well as the fitting of the above specific safety devices, the installation should be subject to a multiple risk

assessment, appropriate signage should be visible (including a flashing light), the equipment should have a CE mark added and fencing to segregate pedestrians from the flow of traffic should also be installed. Always remember that there are two sides to the barrier i.e. pedestrians can approach the barrier from both directions!

Any road that features an automated barrier should be clearly marked to signify that the route is suitable for car access only.

Maintenance matters

Automated barriers should be maintained by a Gate Safe Aware installer every six months.

What should the installer hand over after fitting a Rising Arm Barrier?

The documentation that should be handed over to the gate owner is exactly the same as that defined for an automated gate. Training should be delivered to ensure the customer is fully briefed on the workings of the barrier; an instruction manual and maintenance log book should be provided; the CE mark should be fitted to the barrier and a Declaration of Conformity should be issued.

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Legal Responsibilities

Installer:

- Supply of Machinery (safety) Regulations 2008
- Health and Safety at Work Act 1974
- The Workplace (health, safety and welfare) Regulations 1992
- Provision and Use of Work Equipment Regulations 1998

Electricians:-

- Supply of Machinery (safety) Regulations 2008
- 19th edition BS 7671 the IET Wiring Regulations
- Health and Safety at Work Act 1974
- The Workplace (health, safety and welfare) Regulations 1992
- Provision and Use of Work Equipment Regulations 1998

Important contacts

Gate Safe www.gate-safe.org / info@gate-safe.org / 01303 840 117

Health and Safety Executive: www.hse.gov.uk/work-equipment-machinery/powered-gates/introduction.htm

Glossary of terms

For a full glossary of automated gate related terms, visit the Gate Safe website, www.gate-safe.org.

Gate Safe working together with IOSH

GATE SAFE IS PROUD TO BE SUPPORTED BY THE FOLLOWING ORGANISATIONS



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