The essence of a safe gate: from production to installation and use

A gate is a good solution for many companies to control access to their site. As is a robust barrier that does its job daily. However, a gate or barrier needs regular maintenance to continue to function properly. Even more importantly, this is needed to guarantee the safety of users. In this article, we will discuss all matters that are important to keep the gate safe.

Gates come in various shapes and sizes. Think of swing gates for pedestrians, speed gates for cars and sliding gates to close the entire perimeter. All different ways to arrange access to a site. Each and every one of them must meet strict safety requirements. But what exactly can you expect from your supplier? What does a supplier do to ensure a safe product? Who is responsible for the gate when it is installed on your site? And how do you prevent a gate or barrier from causing unsafe situations? We provide extensive answers to these questions in this article. But to explain those answers, we first delve into the definition of a safe gate.

What is a secure gate?

A secure gate must comply with various laws and regulations. The law distinguishes between manually operated gates and electrically driven gates. Electrically driven gates are categorized as machines. Under the Machinery Directive and national regulations, these machines must meet strict health, safety and environmental requirements. The CE mark is applied to machines that meet these requirements. This is a legally required directive that products must meet within the European Union. In addition, there are different guidelines for each country or region. In Germany and Sweden, for example, it is mandatory for owners to arrange that a certified party services gates annually. In France, every automatic gate must be equipped with a warning light and lighting. In the UK we have additional specific essential health and safety requirements.

How is a gate CE marked?

The safety requirements stipulate that machine manufacturers must limit the risks to users of injury or damage. Hazards are divided roughly into three areas:

- Danger of collision
- Risk of crushing
- Risk of breakage due to the passage of limbs through a gate

When designing a gate, manufacturers identify all possible hazards. To do this, they make a risk assessment of factors such as sharp edges or areas in which a person can get trapped. During design, manufacturers must eliminate those hazards as effectively as possible. However, there are

also integral parts that they cannot adjust. An electrically driven gate simply has a moving edge that can bump into someone. If producers cannot eliminate this danger, they must protect it. For example, by fitting guards or safety sensors.

Residual risks and inspection

Despite these measures, there is always a risk of residual risks. For example: a gate is equipped with safety sensors to detect people, but the gate can still bump into someone at a low speed. This is an acceptable risk, with a minimum possibility of injury or damage. Manufacturers must inform users of any residual danger. Such as by describing it in the user manual. If the risk is not acceptable, a manufacturer must adjust the design. Manufacturers must then have each new type of gate inspected by an independent body. This party assesses against the minimum requirements, as described in the relevant product standard. For example, it prescribes the maximum force that an automatic gate can exert when opening and closing. If the independent body approves, the product meets the standards of the European Union plus Switzerland, Liechtenstein, Norway and Iceland.

Quality guarantees

Manufacturers therefore show they meet the standard by applying the CE mark. They also keep a technical file detailing how each gate is constructed. In addition, it is important to demonstrate that not only the first, but also the subsequent products are safe. Manufacturers guarantee this in their factory production control, by recording each stage of the production procedure. In addition, an independent body regularly samples parts. They request material certificates for this, which manufacturers use to demonstrate that a product has been produced in accordance with the standard. If incidents occur with a gate, they are able to show that no mistakes were made in the production process.

Endurance and strength tests

In addition to the general product standards, manufacturers have the right to test mechanical structures themselves. They perform endurance tests, among other things, to gain insight into the service life of components. This way, they determine which critical parts are susceptible to wear. Endurance tests are often focused on specific properties. For example, producers test for temperature, wind force and other values. This information allows them to determine under which conditions a gate will continue to perform optimally. By doing this they can improve components or better determine the required maintenance interval.

In addition, there are components that manufacturers physically test. They do this to calculate the forces that are released during certain movements of a gate. By exercising various forces, they gain more insight into the impact on the components. Where are the possible weak points? With which force is the risk of injury minimal? Based on this, producers can determine the maximum speed of a machine, among other things. In this way they ensure that the products enter the field more safely.

Installation

Many producers manage the installation of products in-house. A gate that is not properly installed may still compromise safety. If a gate is deemed to be incorrectly fitted, the installer is legally responsible provided it has been established that the manufacturer has supplied a reliable product. That is why producers often advise having the installation carried out by qualified technicians. These are professionals, trained to correctly install the product. In addition, they also know exactly which environmental factors - such as sufficient space and green areas - they have to take into account. And they have the certificates to work according to the correct procedures - such as Lock Out, Tag Out. This way they prevent products from being used incorrectly.

Responsibility of the owner

After installation, the responsibility for the gate lies with the user. What many gate owners do not realize is that the CE certification also applies to them. If companies want to install an automatic sliding gate, they are legally obliged to buy a CE-certified product. In addition, if the gate causes material damage or injury, the owner must also demonstrate that the gate complies with all the applicable regulations and functions properly. In the event the owner cannot do that, they run the risk of being held liable and the insurance not paying out. In addition to the risk of accidents, companies also run the risk of stagnating their business processes. The reasons for an unsafe gate vary per situation. We list them below.

1. Lack of maintenance

A machine consists of hundreds of components that require regular inspection and maintenance. This is the only way a gate can function optimally and maintain an appropriate level of safety. In various European countries it is even mandatory to have the machine tested bi-annually and to assess whether the installation is still functional. In the Netherlands there is no time limit for maintenance, but the owner is responsible for the maintenance prescribed by the manufacturer.

2. Adjustments by an unapproved or non-competent person

Maintenance on the gate is not always performed by a competent person. It is often the case that parts are removed, fitted or replaced without thorough analysis. This may lead to an unsafe gate and an invalidate both the warranty and the CE declaration of conformity. That is why it is advisable to have all maintenance companies report on their actions and register any modifications to the gate.

3. Environment around the gate changes

When installing a gate, the installer adjusts the safety features to the environment around the gate. Consider vegetation, buildings, fencing and other security measures. However, if the environmental situation changes, the owner runs the risk that the gate is no longer safe enough and additional measures may be necessary.

Complexity requires expertise

As described, the safety of a gate depends on laws and regulations, production, installation and maintenance. Various parties are involved, each with their own responsibility. However, it is certain that a gate is a complex installation with numerous (moving) components. This requires an experienced expert who can guarantee the durability of the machine. In this way, companies not only prevent adverse incidents, but they also guarantee safety on the ground.

Has it been a while since your gates or barriers had maintenance carried out? Submit your request for maintenance and find more information at: heras.co.uk/service