

STAGEDEX

Crowd control barriers

User manual



Original instructions

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Change history

| Issue | Date | Changes |
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1 Introduction

This manual is intended for users of the StageDex crowd control barriers.

1.1 About this product

StageDex crowd control barriers, referred to as crowd barriers in the following, are structural elements designed to be repeatedly assembled and disassembled for use as a safety device to control crowds at events of various types ranging from live concerts to outdoor events. The crowd barriers offer a combination of optimum safety and comfort for the audience as well as a safe working area for security and rescue personnel.

The crowd barrier modules consist mainly of aluminium. All of the vertical panels (see Figure 1, item 5) are welded and riveted. Welding minimises vibrations, and riveting means that the panel is not deformed due to welding.

The crowd barrier modules are connected to one another using the threaded crowd barrier coupler (BAR-30-006), which is inserted into the holes in the handrail and in the front profile of the base frame (see Figure 1, items 2 and 10). A third, optional threaded coupler can also be inserted into the base frame chord (see Figure 1, item 14). The crowd barrier couplers are premounted in the factory and remain permanently in the crowd barrier modules. They are available as spare parts, which means that they can also be removed and replaced.

The undersides of the footplates are ridged to prevent them from sliding over the surface on which the crowd barriers are set up.

All of the crowd barrier modules except for the fixed corners and some of the line-up gate modules (BAR-24-003, BAR-34-004-R and BAR-34-004-L; see Figure 6) can be folded flat for ease of handling and transport. They can be transported on the specially designed, optional crowd barrier dollies (see Section 7.1). Manufactured entirely from galvanised steel, these dollies are available with or without castor wheels and can hold 10 standard 1-m (3.3-ft) crowd barrier modules.

We have paid special attention to product safety when designing the product.

The manufacturer bears no liability for indirect consequential damage or financial loss. The manufacturer bears no liability for any changes made to the product or for any damage resulting from such changes.

1.2 Related information

For more information on the products, see: https://www.prolyte.com/products/portable-stages/crowd-barriers.

1.3 About this manual

Before working with the products, read this manual carefully and pay attention to the information provided. Use this manual to familiarise yourself with the products, their proper use and the safety regulations.

This manual assumes that you have been trained, or work under the control of a competent or qualified person who has been trained, in safety and assembly.

1.3.1 Safety conventions



Indicates a hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.





Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates information that is considered important but which is not hazard-related.

1.4 Terminology

| Term | Definition | | |
|------------------------|---|--|--|
| Abrasion | Loss of material due to wear. | | |
| Allen key | An L-shaped metal bar with a hexagonal head at each end, used to turn bolts and screws having hexagonal sockets. | | |
| Base frame | A frame consisting of a sloping front profile, a base frame chord, side profiles and a footplate. When in use it lies on the ground. See Figure 1. | | |
| Bent element | A component or assembly that has permanent deviation from the intended centre line. | | |
| Competent person | A person who is capable of identifying existing and predictable hazards in the workplace and who is authorised to take prompt corrective measures to eliminate them. | | |
| Connector | A connector used to connect crowd barrier modules together. See Figure 1. | | |
| Crack | A crevice type of discontinuity in a material. | | |
| Diagonal member | An element of a crowd barrier module that is connected to the handrail and the base frame chord and which is compressed by the pushing action of the crowd. | | |
| Equipotential bonding | Joining together metalwork that is or may be earthed so that it is at the same potential (i.e. voltage) everywhere. | | |
| Footplate | An element integral to the base frame on which the crowd stands. When loaded by the crowd, it completely or partially stabilises the crowd barrier against the pushing action of the crowd. | | |
| Frame | A supporting structure consisting of rigid connections. The crowd barriers consist of the vertical frame, the base frame and the diagonal members. | | |
| Handrail | A structural element of a crowd barrier module at a height of no less than 1.1 m (3.6 ft) above the ground. Sometimes also referred to as a main chord. See Figure 1. | | |
| Identification sticker | A sticker on the product containing several items of information about the product. | | |
| Qualified person | A person who, by possession of a recognised degree or certificate of professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated the ability to solve problems relating to the | | |



| Term | Definition | | |
|-----------------|---|--|--|
| | subject matter or work. A qualified person supervises the competent persons. See "Competent person". | | |
| Repetitive use | Assembling and disassembling the same modules or assemblies on multiple occasions. | | |
| Step | A platform whose frame structure is attached to the diagonal members and is supported by the support profiles. These steps are used by security staff to attend to the audience from a more favourable position. See Figure 1. | | |
| ULS | The Ultimate Limit State refers to the maximum load-carrying capacity of a structure before it reaches a point of collapse or failure. ULS design aims to ensure that structures can withstand extreme conditions without suffering catastrophic failure. | | |
| Upright profile | An element connected to the handrail at a 90-degree angle to the base frame. Together with the diagonal members and the handrail, it forms the main vertically resistant structure of the crowd barrier. | | |
| User | A person or a company who or which assembles or uses the products. | | |
| Vertical frame | A frame consisting of the handrail, upright profiles and the bottom profile. The vertical panel is attached to it. See Figure 1. | | |
| Vertical panel | A plane element made of perforated aluminium that is attachted to the vertical frame of the crowd barrier by means of welding and riveting. See Figure 1. | | |





Figure 1: StageDex crowd barrier BAR-30-100

- 1 Handrail
- 2 Vertical frame top connector (pin)
- 3 Bolt connection receiver
- 4 Upright profile
- 5 Vertical panel
- 6 Support profile
- 7 Diagonal member
- 8 Step
- 9 Sloping front profile

- 10 Base frame front connector
- 11 Footplate
- 12 Barrier-to-barrier connection
- 13 Base frame side profile
- 14 Receiver for base frame rear connector (optional)
- 15 Base frame chord
- 16 Bottom profile of vertical frame
- 17 Barrier-to-barrier connection
- 18 Diagonal member connection

1.5 Standards

NOTICE

It is the sole responsibility of the owner or provider to check with the local authorities whether the legislation used by PROLYTE is acceptable in the country of use.

The following standards are taken into consideration for manufacturing, design and use:

- 305/2011/EC, European Construction Product Regulation
- EN 1990, Eurocode 0: Basis of structural design
- EN 1991, Eurocode 1: Actions on structures
- EN 1993, Eurocode 3: Design of steel structures
- EN 1999, Eurocode 9: Design of aluminium structures
- EN 1090-1, Execution of steel structures and aluminium structures Part 1: Requirements for conformity assessment of structural components



- EN 1090-3, Execution of steel structures and aluminium structures Part 3: Technical requirements for aluminium structures
- EN 10042:2006, Arc-welded joints in aluminium and its weldable alloys Quality levels for imperfections
- EN ISO 3834-1 & 3, Quality requirements for welding Fusion welding of metallic materials Part 1: Guidelines for selection and use; Part 3: Standard quality requirements
- EN 754 (all parts), Aluminium and aluminium alloys Cold drawn rod/bar and tube
- EN 755 (all parts), Aluminium and aluminium alloys Extruded rod/bar, tube and profiles
- EN 515:2017, Aluminium and aluminium alloys Wrought products Temper designations
- EN 573 (all parts), Aluminium and aluminium alloys Chemical composition and form of wrought products
- EN 10204:2004, Metallic products Types of inspection documents

While they are not mandatory, unlike the standards listed above, the following additional design references are mentioned in the product calculation report:

- EN 13200-3, Spectator facilities Part 3: Separating elements Requirements
- "Temporary demountable structures: Guidance on procurement, design and use", a publication by the UK Institution of Structural Engineers.

2 Safety

NOTICE

Read these safety texts carefully before working with the products.

NOTICE

Make sure manuals are available at all times for all users and employees.

! WARNING

Assembled crowd barriers must always be checked as regards their structural stability and strength by a structural engineer. The technical specifications should never be exceeded.

! WARNING

Do not use damaged or malfunctioning parts.

MARNING

Mark any damaged or worn material clearly and discard the material immediately.



2.1 Electrical safety

2.1.1 Equipotential bonding



ELECTRICAL HAZARD

Metal structures of crowd barriers that are in contact with electrical equipment could develop dangerous touch voltages in the event of an electrical fault. Before energising any of the electrical equipment, the user must ensure that the crowd barrier structure is properly earthed. This applies to all elements made of electroconductive material that have equipment placed on or attached to them, or across wire and cable runs that, if damaged, could make electrical contact with metal parts. Such contact can be made with clips, pipe clamps, screw joints or when using special single-pole locking connectors.

It is extremely important to earth the crowd barrier modules because the audience and installers very often come into direct contact with the crowd barrier structures when the suspended fixtures are electrically charged.

2.2 Personal protective equipment

For health and safety reasons, people moving, assembling, disassembling, maintaining or transporting the products should wear adequate personal protective equipment such as, but not limited to, gloves, hearing protection, hard hats and safety shoes.

All people working with crowd barriers should be instructed and informed about the correct usage and possible dangers before use.



PERSONAL INJURY HAZARD

Always wear hard hats, safety shoes, hearing protection and protective gloves when moving, assembling, disassembling, maintaining or transporting the products.



PERSONAL INJURY HAZARD

Comply with local noise level regulations when assembling and disassembling the products.



PERSONAL INJURY HAZARD

Comply with local regulations concerning the maximum weight allowed per person when carrying or moving the products.

3 Limitations of use

The crowd barriers must always be used within the limits of the structural report and the declarations provided.

All of our crowd barriers are calculated according to the Eurocode 9 (EN 1999) standard. Eurocodes are standards based on Load and Resistance Factor Design (LRFD).

Use the products only for their specified purpose. Any use other than the specified use is regarded as misuse. The user or operator, not the manufacturer, is liable for any damage or injury resulting from such cases of misuse.



3.1 Compatibility with other products

Our standard crowd barrier module may be compatible with crowd barrier modules from other brands. However, crowd barriers can differ considerably depending on their design, layout and manufacture (for example, material properties, alloy, thickness or system tolerances). Therefore, assembling a mix of crowd barriers consisting of various brands and the related legal compliance are the sole responsibility of the user.

3.2 Environmental influences

3.2.1 Temperature

Crowd barriers can be used at temperatures from -20° C to $+80^{\circ}$ C (-4° F to 176° F). However, take special care if crowd barriers are used at temperatures below 0° C (32° F).

3.2.2 Aggressive environments

Take special care when crowd barriers are used in, or in the vicinity of, aggressive environments. The aluminium alloys used in the crowd barriers might not be suitable for these environments.

The alloy that is used has good properties in saltwater environments, but oxidation can occur on the surface. Clean the crowd barriers regularly with fresh water or with a dedicated protection product.

4 Transport, handling and storage



PERSONAL INJURY HAZARD

Vertical transportation or storage of the products can be hazardous due to the products falling over.



PERSONAL INJURY HAZARD

Always wear hard hats, safety shoes, hearing protection and protective gloves when moving, assembling, disassembling, maintaining or transporting the products.

Handle the products with care. Do not drop them or drag them around. Do not throw crowd barrier modules on top of each other. Prevent damage caused by sharp edges such as the forks of a forklift.

Dedicated dollies (see Section 7.1) such as BAR-10-010 or BAR-10-011 have been designed specifically for this purpose and can be a highly effective means of transportation and storage, while providing the crowd barrier modules with some extra protection.

Make sure that the products cannot move or shake during transport. The abrasive motion of moving or shaking can lead to severe damage.

5 Identification

StageDex products can be recognised by identification stickers which are attached to all products.



Make sure only StageDex original components are used. For more information, contact your distributor or the manufacturer.



NOTICE

An identification sticker is always delivered with the product. Replace any missing identification stickers. Contact the manufacturer or its representative for information on the correct procedure.

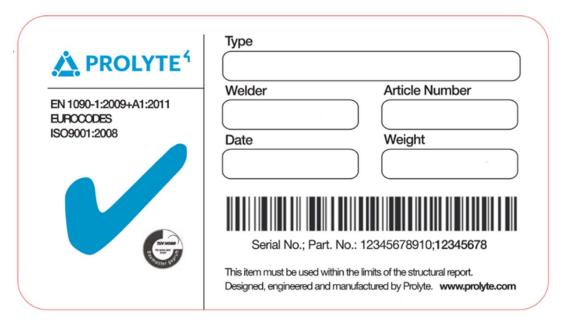


Figure 2: Example of a StageDex identification sticker

6 Technical specifications

6.1 Load capacity

The StageDex crowd barrier modules can withstand a maximum horizontal load, caused by the pushing of a crowd, of 3 kN/m (17 lbs/inch) on the handrail. They have a design load of 5 kN/m (28.6 lbs/inch). However, the overall stability specifications that are applicable to manufacturing vary depending on which standard is used, because the required safety factors are different.

a) According to Eurocode 1 – EN 1991-1-1 (safety factor 1.5):

- A crowd barrier subjected to a push of 3 kN/m (17 lbs/inch) is stable if the coefficient of friction of the ground on which it is positioned is greater than or equal to 0.8.
- If the coefficient of friction is less than 0.8, the crowd barrier must be fixed to the ground using anchors with a shear resistance of 4.5 kN/m (25.7 lbs/inch) (ULS value).

b) According to EN 13200 -3 (safety factor 2.0):

 A crowd barrier subjected to a push of 3 kN/m (17 lbs/inch) must be fixed to the ground using anchors with a shear resistance of 6.6 kN/m (37.7 lbs/inch) (ULS value).

NOTICE

See Section 6.2 for ground coefficient of friction evaluations.

NOTICE

The connections between crowd barrier modules permit lateral load sharing with the adjacent module. They also ensure a more rigid and stable system. Load distribution between multiple modules must be carefully evaluated by a structural engineer.



6.2 Site influence

It is essential to give consideration to the conditions of the location in which, and the surface on which, the crowd barriers will be installed. The coefficient of friction between the base frame and the ground is critical for evaluating the resistance of a crowd barrier to sliding.

EN 13814: 2019 "Safety of amusement rides and devices – Part 1: Design and manufacture" and ANSI E1.21-2013 "Entertainment Technology – Temporary Structures Used for Technical Production of Outdoor Entertainment Events" provide coefficients of friction for some surface materials.

7 Approved accessories

7.1 Dollies





Figure 3: Dollies: single and stacked (shown without castor wheels)

A specially designed dolly (BAR-10-010) is available for storing and transporting the crowd barriers. The dolly is made of galvanised steel and can hold up to 10 standard 1-m (3.3-ft) crowd barrier modules stacked on top of one another. The dolly is also available with 4 castor wheels (BAR-10-011); the castor wheels cannot be retrofitted.

You can also stack the dollies on top of one another using a forklift to save storage space. To do this, the underside of the dollies is equipped with a pocket for inserting the forks of the forklift. Make sure that the load capacity of the forklift is sufficient for the weight of the crowd barriers and the dolly.

8 Coatings and surface treatments/finishes

Coatings and surface treatments/finishes should only be applied after consulting the coating or treatment/finish manufacturer or another party qualified to evaluate the possible effects of the coating or surface treatment/finish on the structural properties and load bearing capabilities of the crowd barriers.

Powder coating is permitted at a maximum temperature of 180° C (356° F) for up to 20 minutes. If it becomes necessary to renew the powder coating, the process must be coordinated with PROLYTE.

Records detailing the application of any coating or surface treatment/finish should be kept, paying particular attention to processes requiring the application of heat.



Chemical removal of coatings and surface treatments/finishes may only be carried out after consulting the chemical manufacturer to ensure that the chemical will not affect the mechanical properties of the aluminium.

Abrasive blasting should not be used, because it can cause loss of material.

9 Assembling and disassembling

9.1 Safety when assembling and disassembling

A competent person or sufficiently instructed personnel under the supervision of a competent person should always assemble the product.

Before assembly, use and disassembly, the competent person is responsible for the following, amongst other tasks:

- Carrying out all of the instructions as described in this manual.
- Instructing the people carrying out assembly and making sure that all of the instructions issued by the engineer who verifies assembly are implemented correctly.

9.2 Required tools

- 13-mm (0.51-in) spanner (for the threaded crowd barrier couplers; see Figure 1, items 2 and 10 (also for the optional base frame rear connector, if fitted))
- 12-mm (0.47-in) spanner for the connections between the crowd barrier modules (see Figure 1, items 3 and 12/17)

9.3 Assembling a crowd barrier

This description applies to standard crowd barrier modules, fixed corners and flex corners. The item numbers used in the description refer to Figure 1:

- 1. Place the crowd barrier module flat on the ground with the base frame at the bottom.
- 2. Fold open the crowd barrier module by lifting it at the handrail. The vertical panel automatically rotates forwards until it engages.
 - If it does not do this, you can use your foot to move the vertical panel into position.
- 3. The step at the rear automatically drops into position.
- 4. Assemble the next crowd barrier module in the same way.
- 5. Move the crowd barrier module that you have just assembled up to the module that was assembled beforehand.
- 6. Push the pre-assembled connectors on the handrail and the front profile of the base frame into the holes in the module that was assembled beforehand.
- 7. To connect the crowd barrier modules together:
 - a. Insert an M12x140-mm (M12x5.5-in) hexagon head bolt into the bolt connection receiver (item 3) beneath the handrail and fasten it with a nut.
 - b. Insert an M12x180-mm (M12x7.09-in) hexagon head bolt into the hole in the base frame side profile (item 12) and fasten it with a nut.

The crowd barrier modules are connected and cannot fall over.



9.3.1 Assembling a Flex Corner



Figure 4: Flex Corner without and with inlay plate

Steps 1 to 7a. of the assembly process described in Section 9.3 are identical for this crowd barrier module.

However, in step 7b, an M12x140-mm (M12x5.5-in) hexagon head bolt is inserted into the hole in the base frame side profiles (item 12) and fastened with a nut instead of an M12x180-mm (M12x7.09-in) hexagon head bolt.

Then insert the inlay plate as shown in Figure 4 to create the corner angle that you need. The inlay plates are positioned loosely and are not connected to the crowd barrier modules; no tools are needed. A 90-degree and a 135-degree inlay plate are available, but other inlay plate sizes can be manufactured on request as needed.

9.3.2 Assembling a Snake Gate

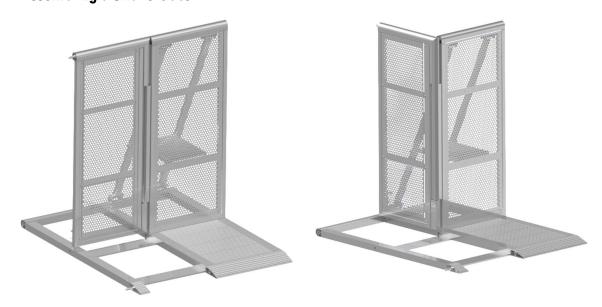


Figure 5: Snake Gate: closed and open

Assembling the snake gate modules is identical to the process described in Section 9.3.

Once assembly has been completed, you can install your standard cable ramp beneath the vertical panel, allowing cables to be routed from the stage to the front of house.

The integrated door in the 100-cm (39-inch) snake gate module is locked and unlocked using the retractable pin in the handrail, and enables technicians or security personnel to pass through.



9.3.3 Assembling a Line-up Gate

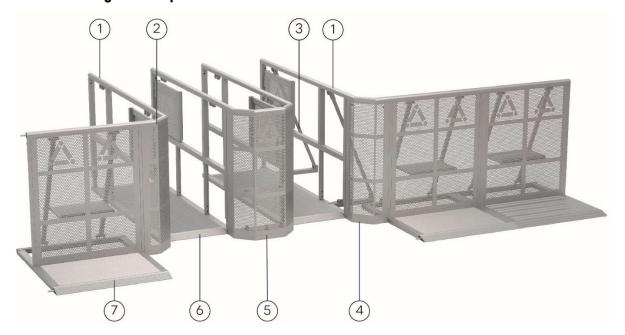


Figure 6: Line-up Gate

| 1 | BAR-34-002 | 5 | BAR-34-003 |
|---|--------------|---|------------|
| 2 | BAR-34-004-L | 6 | BAR-34-001 |
| 3 | BAR-34-005 | 7 | BAR-30-100 |
| 4 | BAR-34-004-R | | |

The standard version of the line-up gate is 60 cm (23.6 in) wide, with a total depth of 230 cm (90.6 in) and a minimum overall width (1 gate) of 120 cm (47 in). This is a modular system, meaning that more gates can be connected to create multiple entries. Each individual entry can be closed with the separate hinged gate to prevent people from entering, as needed.

The descriptions below refer to the numbered items in Figure 6.

For the left side:

- 1) Place item 6 on the ground.
- 2) Connect item 1 to both sides of item 6 using the conical connectors from the CCS6 system.
- 3) Connect item 2 to item 1 on the left.
- 4) Connect item 7 to item 2 on the left.
- 5) Connect item 5 to item 1 on the right.
- 6) Item 3 can be optionally connected to item 1 as shown in Figure 6 using a clamp with a hook for additional stability.

For the right side:

- 1. Place item 6 on the ground
- 2. Connect item 1 to both sides of item 6 using the conical connectors from the CCS6 system.
- 3. Connect item 5 to item 1 on the left.
- 4. Connect item 4 to item 1 on the right.
- 5. Connect item 7 to item 4 on the right.
- 6. Item 3 can be optionally connected to item 1 as shown in Figure 6 using a clamp with a hook for additional stability.

The line-up gate is ready to use.



9.4 Disassembling a crowd barrier

Before disassembling the individual crowd barrier modules, check them for any damage according to the criteria in Section 12. Mark a damaged crowd barrier module and, if necessary, discard it. The description below applies to all of the crowd barrier modules except for the line-up gates.

- 1. Undo the connections (items 3 and 12/17 in Figure 1).
- 2. Release the connections (items 2 and 10 (optionally also item 14) in Figure 1 between the crowd barrier module you want to disassemble and the module located next to it by pulling them apart.
- 3. Check the components for damage. Mark the components if they are damaged and, if necessary, discard them.
- 4. Fold the module by lifting up the built-in step and rotate the vertical frame, closing it against the footplate.
 - The crowd barrier module is disassembled and can now be stored or transported.

9.4.1 Disassembling a Flex Corner

Remove the inlay plate and then disassemble the flex corner as described in Section 9.4.

9.4.2 Disassembling a Snake Gate

First make sure that the integrated door in the 100-cm (39-inch) snake gate module is closed and secured.

The disassembly process for this module and for the 50-cm (19.7-inch) snake gate module is then identical to the process described in Section 9.4.

9.4.3 Disassembling a Line-up Gate

Disassembling is carried out in the reverse order of assembling, as described in Section 9.3.3.

The modules fold to the size of a pallet for easy and compact transportation.

10 Maintenance

Although aluminium does not corrode in the same way that many steel alloys do, ambient influences can have a corrosive impact on aluminium. Take special care with crowd barriers that are stored outdoors for an extended period of time, especially in areas with a high level of industrial pollution, near saltwater, near tram lines or near swimming pools. Barriers should be individually inspected each time before being used to determine whether any pollution has had a corrosive effect.

Repairs should be carried out and warranted by either the manufacturer or a suitably qualified person approved by the manufacturer.



Do not repair the product without first consulting the manufacturer.

11 Inspection

We recommend that a competent person carries out a careful and documented inspection at least once a year or as often as required by the circumstances or the intensity of use.



! WARNING

Perform the inspections based on the criteria described in Section 12 to ensure the safe use of the products.

In case of an accident, misuse or malfunction, the products should be marked, inspected by a qualified person to establish their structural integrity for re-use and discarded if necessary. The products should be identified accordingly, and records of identification numbers and photos should be kept.

! WARNING

Do not use damaged crowd barriers or connectors.

The user is responsible and liable for the safe use of the products.

For information on the discard criteria, see Section 12.

If any damage preventing the continued safe use of the products is discovered during an inspection, the products must be discarded and disposed of. In most cases, it is not enough to just identify the damage. Disposal is the only safe way of protecting others from the risks associated with damaged material.

The following checks and activities are required during inspection. This list is not exhaustive.

- Check all components for damage and corrosion. Damaged and corroded parts must be removed, disposed of and replaced.
- Check crowd barriers for missing parts. If any parts are missing, they must be replaced.
- Burrs and sharp edges must be removed using fine sandpaper or a file.
- Maintenance and repairs must only be carried out by a competent person. If in doubt, contact the manufacturer.

11.1 Inspection levels

11.1.1 Regular inspection

A competent person must perform regular visual inspections each time before the product is used. You do not have to keep records. The regular inspection includes a visual inspection for signs of external damage and wear. If any damage is detected during the visual inspection, a qualified person must carry out a detailed inspection based on the criteria described in Section 12.

11.1.2 Periodic inspections

At least once a year a qualified person must perform periodic visual inspections on behalf of the user based on the criteria described in Section 12, and a record of the inspections must be maintained.

11.2 Inspection frequency

11.2.1 Initial inspection

No matter whether the product is new or used when it is first purchased, inspect the product based on the criteria described in Section 12. Keep a record of the inspections.

11.2.2 Inspections after an accident, incident or malfunction

If the crowd barriers have suffered any accidents, incidents or malfunctions, inspect them based on the criteria described in Section 12.

Examples of accidents, incidents or malfunctions include, but are not limited to, the following:



- Dropping a crowd barrier on the floor from a height.
- Subjecting a crowd barrier to shock loads.

11.3 Records

The owner must keep records of initial and periodic inspections. These records should be signed and dated by the person carrying out the inspections.

12 Discard criteria

All discard criteria must be taken into consideration when performing inspections.

NOTICE

The majority of the crowd barrier components can usually be replaced, meaning that the crowd barrier module does not have to be discarded in its entirety. If in doubt when assessing individual damage, contact the manufacturer, supplier or a qualified person.

Discard criteria can include, but are not limited to, the following:

- Nuts that cannot be tightened or loosened by hand.
- Elements that do not engage correctly.
- Damaged or bent connectors.
- Deformation of the crowd barriers and their components, such as the diagonal members.

| Part | Part Failure symptoms | |
|-------------------------------------|--|--|
| Barrier frames | Welds that are cracked or show other irregularities | |
| Barrier frames and diagonal members | Excessive corrosion whereby the cross-sectional area of the component is reduced by more than 10% Scratches or signs of abrasion on the surface of the extruded profiles that reduce the wall thickness by more than 25% or the cross-sectional area of the component by more than 10% Indentations/dents deeper than the wall thickness Excessive bending of upright profiles, chords, diagonal members or support profiles by more than the length divided by 300. In this case, this means the length of the element between one connection and the next | |
| Connectors | Ovalisation of the connector holes by more than 10% of the diameter Corrosion causing loss of material | |
| General for all extrusions | Fractures Cracks Holes appearing after the crowd barrier has been put into use | |

WARNING

If the vertical panel is excessively deformed, this does not constitute irreversible damage, because it can be replaced. However, if the panel is otherwise damaged or detached, the function required by the standards is compromised, meaning that it must be replaced and/or repaired.



13 Warranty

For a period of 24 months, we undertake to repair any damage attributable to faulty materials or workmanship free of charge provided that the product is forwarded freight paid to our factory or one of our contract service organisations.

The warranty period begins on the date of delivery, proved by a purchase receipt such as an invoice, a delivery note or a copy of one of these.

The warranty is applicable to new products only.

The warranty does not cover damage due to transport, negligent handling, overload or parts subject to normal wear and tear. Nor does it cover damage resulting from misuse due to non-observance of the instructions in this manual.

The fitting of replacement parts not supplied by us or modifications of our design by third parties also invalidates the warranty.

Warranty repairs do not renew or extend the warranty period.

Contact details:
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