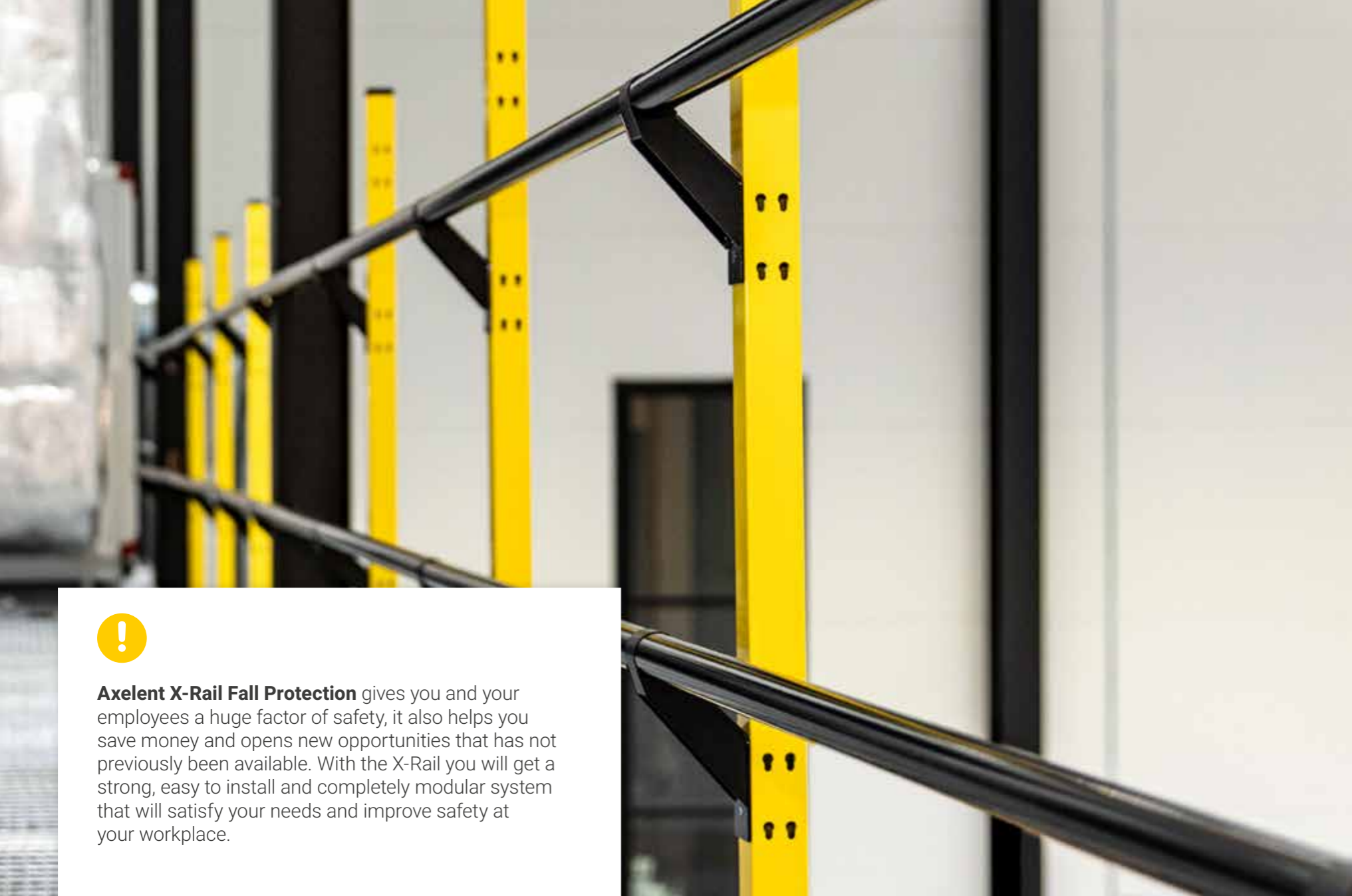




AXELEN

Fall Protection

Est. 1990



Axelent X-Rail Fall Protection gives you and your employees a huge factor of safety, it also helps you save money and opens new opportunities that has not previously been available. With the X-Rail you will get a strong, easy to install and completely modular system that will satisfy your needs and improve safety at your workplace.

Quick and easy way to improve safety on mezzanine floors, platforms and walkways

There is a quick and easy way to improve safety on mezzanine floors, platforms and walkways and eliminate the risk of falling from a height in your workplace. Here is a guide to what you need to know about Axelents X-Rail Fall Protection system.

X-Rail comes in two post heights; 1400 mm and 2300 mm, and can be installed in a number of different heights and center widths allowing you to choose your preferred configuration. The system is completely interchangeable with standard X-Guard in areas where edge protection is not required.

X-Rail is quickly and easily installed either directly on a concrete floor, bolted to the steel mezzanine I-beams of the mezzanine structure or on several different bases, including 38 mm plywood or metal grid channels. The installation of the modular handrail is also easy, the existing key hole slots in the rails allow to use a handrail and additional kneerail, if needed.

To ensure that maximum safety is achieved you also may also install mesh, solid or transparent panels depending on the nature of the installation and the requirements. Using a full mesh panel and the kick plate, you avoid gaps and thereby prevent accidents with smaller objects falling to lower levels.

Why X-Rail?

The X-Rail system will mean safety for you and your employees. Additionally, it helps you save money and opens new opportunities that were not available before. With X-Rail you will get a strong, easy to install and completely modular system that will satisfy your needs and improve safety in your workplace.

Tested and approved against the following standards:

- DIN EN ISO 14122-3: 2016
- BS 6180:2011
- AS 1657:2018
- OSHA 1910.29

All tests and verification have been performed with below various types of floor to ensure that it works in different environments:

- Concrete
- 38 mm mdf board placed on top of an I-beam in steel
- Grid floor placed above an I-beam in steel

When and why do you need fall protection?

Depending on the industry you are working in, the requirements for having a fall protection installed differ. Some businesses require protection from the floor level while others are more generous. A simple rule is that if your employees work at a height of more than a meter above a level below, you need some form of fall protection. Especially if they are working above equipment or substances that may be harmful or if they could lose grip and fall. If a fall accident should occur, it could be fatal.

In any industry, the staff's safety always needs to be the main concern and top priority. By installing a correct and certified system from the very beginning you are not only protecting your employees, you are also saving money by preventing accidents and downtime of damaged machinery. Make sure that you always consult a safety expert and do research to prevent injury to your personnel and violation of safety rules.

On page 4 we list the standards fulfilled by X-Rail. These are standards for fall protection and guard railing systems to ensure that regulations and requirements are met.

Good reasons to choose our X-Rail Fall Protection system

- 1 Downtime for damaged machinery** is another costly factor, especially downtime for repair. This will be prevented by a correct fall protection system in place from the very beginning.
- 2 If your employees work at heights, you need to eliminate hazards.** To avoid this, you need a fall protection system that is designed to prevent people from falling over, through or underneath the railing.
- 3 The system can be installed once the mezzanine has been built,** saving money on temporary scaffolding and other safety measures during the construction phase.
- 4 The X-Rail system includes a** combination of posts, handrails, kick plates and if your installation needs it also panels. The use of solid panels or mesh prevents larger items from accidentally dropping to the levels below, potentially causing harm to pedestrians and machinery.

Standards met by our fall protection system X-Rail

To ensure staff safety, fall protection is often needed in various industries. But it may sometimes be hard to know all the regulations and laws that apply to your business. Here is some information on the standards that X-Rail fulfils.

With a combination of panels and posts, handrails, kneerails, and kick plates the X-Rail system prevents accidents and safely protects employees and visitors from risk of falling. According to the regulations, one 10 cm kick plate and a handrail and a kneerail are always required (kneerail is not needed if you install a mesh or other closed panel). Our fall protection is certified to be installed either directly onto concrete floor or bolted to the steel mezzanine I-beams of the mezzanine structure. The system has been fully tested to the standards applicable in the relevant markets. This will give you peace of mind knowing that you can save both time and money and ultimately have a much better solution meeting your requirements. The system has been evaluated by both simulation and actual physical testing. This ensures that the system is fully compliant in all areas it will be installed.



Standards met by our fall protection system X-Rail

DIN EN ISO 14122-3:2016

This part of ISO 14122 contains requirements for non-powered stairs, stepladders and guard-rails which are part of a stationary machinery and of non-powered adjustable parts and movable parts of fixed means of access (like screws, nuts and welding). The ISO 14122 series as a whole is applicable to both stationary and mobile machinery where fixed means of access are necessary.

describes the requirements for protective, crash and crush barriers as well as those that impose a speed limit of up to 16 km/h.

AS 1657:2018

This Australian standard sets the requirements for the design, construction and installation of fixed platforms, walkways, stairways, and ladders that are intended to provide safe access to places used by operating, inspection, maintenance and service personnel. It also applies to movable platforms that are permanently configured, permanently installed roof access, and permanently installed access for inspection and maintenance of the roof itself. The standard also provides information on recommended component dimensions and materials for edge protection.

BS 6180:2011

This British standard applicable in the UK provides guidance and the latest recommendations for the construction of barriers in and around buildings. BS 6180 is a standard that will guide the manufacturing company through the process of designing and constructing barriers, including measuring safety, reinforcing structures and testing corrosive or flammable qualities.

OSHA 1910.29

This American occupational safety and health standard for fall protection systems and falling object protection-criteria and practices ensures that the system meets the comprehensive requirements regarding for example design, heights, installation, materials and strength of the posts, guardrails, anchoring and safety nets.



Technical information

Mesh panels

Our mesh panels 1300 mm and 2200 mm comes in 13 different widths. Both of the panels have customized post to fit the height. See next page.

The standard panel colour is RAL 9011 but customized colours are available upon request.

Sheet metal and plastic panels

The X-Rail series also has sheet metal and plastic panels and they come in one height, 2200 mm, and four widths. Sheet metal panels come in standard colour RAL 9011.

Post

The post 50x50 mm comes in two heights and the colours range is RAL 1018, but customized colours are available upon request.

Handrail / Kneerail

Available in length to fit panels with the width 1000 mm and 1500 mm. For other widths of panels, the rails needs to be adjusted in length by being cut in place during assembly. Brackets for placement in keyholes are a standard default but if free placement is needed there is a separated article number.

The standard colour is RAL 9011 (only available in this color).

Kick plate

A kick plate is always included in RAL 9011 (only available in this color).

Available in length 1000 mm and 1500 mm, for other lengths the plate needs to be cut in place during assembly.

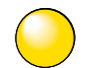
Product facts X-Rail

Panels



Graphite black
RAL 9011

Posts



Zink yellow
RAL 1018



X-Key

A unique key for quick panel release. X-Rail panels can only be dismantled using an X-Key

(All panel and post orders include one key)

Uprights	30x20 mm
Horizontals	25x15 mm
Posts	50x50 mm
Vertical wires	Ø 3 mm
Horizontal wires	Ø 2.5 mm
Mesh aperture	50x30 mm
Plastic	2 mm (thermoplastic polyester)
Sheet	0,8 mm
Finish	Phosphatising/Epoxy paint
Colour mesh panel	Graphit black RAL 9011
Colour post 50x50 mm	Zink yellow RAL 1018

(Other colours can be quoted)

X-Rail – Accessories

X-Rail self-closing swing gate

For Axelent X-Rail fall protection, we offer an adjustable-width gate with self-closing mechanism. It is meant to be installed in front of stairs or ladders leading downward from a platform or walkway¹.

Coming from the stair or ladder the operator pushes it open toward the platform. After passing the gate it softly closes and then serves as fall protection. The opening dimension can easily be adjusted between 690 and 1210 mm by means of telescoping bars. The gate is delivered complete and pre-assembled in a specially adapted packaging. It is easy to attach to the posts in the X-Rail range and can be used with right or left hinging.

The gate meets the requirements for use as fall protection². To attract attention and be clearly distinguishable from the guard railing, the gate is painted in a highlight colour. To prevent pinching, infill pieces are available as accessories to create space between the gate and the guard railing, for example in connection with an internal corner.



Footnote

¹The self-closing gate should not be used as a pallet or transfer gate unless additional safety measures ensuring fall protection during pallet or goods transfer have been taken.

²To meet the requirements in the OSHA 1929.10 standard, when the gate is expanded to its maximum width, do not end the installation with the gate's hinged post only.

Properties

- Flexible
- Self-closing
- Delivered pre-assembled
- Easy to assemble
- Meets the requirements for fall protection
- Infill pieces available as option



Hand- and kneerail
Available in length to fit panels with the width 1000 mm and 1500 mm.



Handrail - End



Handrail - Outer corner
RAL 9011



Handrail - Inner corner
With support arm, RAL 9011



Handrail - Fitting
With selfdrilling screw, 1 KIT



Handrail - Fitting
With rivet, 1 KIT



Kick Plate
A kick plate is always included and available in length 1000 mm and 1500 mm.



Kick Plate - Bracket Inner corner



Shimset
Used to adjust the height of X-Rail posts where the floor is uneven.



Click and drag! It is that simple and quick to get an overview of what you need and what your project will look like. The drawing can then be used as an order basis.



SnapperWorks - Simple and brilliant

Axelent's in-house developed, user-friendly drawing application, SnapperWorks, enables our customers to get a quick layout drawing of your project. Everything is prepared, all you have to do is click and drag to get a complete drawing with all the parts you need.

The benefits of SnapperWorks are many...
Read more about SnapperWorks: www.snapperworks.com

- It is tailored to Axelent's modules and contains all our products: machine safety, warehouse partitioning, impact protection, fall protection and store room walls.
- It is easy to learn.
- The program enables you to import DWG and DXF files and draw, for instance, panels straight onto the drawing.
- From specified lengths you can let the program configure the most economical panel layout.
- It quickly provides you with a complete drawing including material specifications.



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