



EDGE PROTECTION

ALL-IN-ONE-EDGEGUARD (PERMANENT)

User Guide



HIRE & SALES

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Altrad Hire & Sales

Support for Construction & Industry



Altrad Hire & Sales is the UK's leading supplier of: Scaffolding, Temporary Fencing, Light Access, Edge Protection, Safety Decking and Groundworks for hire and sale.

OUR **CUSTOMER COMMITMENT** IS TO DELIVER:



BEST QUALITY

We work closely with our suppliers to ensure consistent product quality every time. All our products are specified to meet or exceed statutory requirements, verified by our Quality Assurance team.



BEST AVAILABILITY

Our nationwide branch network, transport fleet and stock holding ensure we can supply your equipment needs. What, When and Where you need equipment.



BEST PARTNERSHIP

We can take care of all your equipment needs; supplemented by a full range of engineering, design, specification and business services. Our focus is to work together, supporting the growth of your business.



BEST VALUE

Our global supply chain, purchasing and lean business means we don't pass on unnecessary costs to you. We aim to provide consistently low prices and the best value when you buy or hire from us.

Contents

About All-In-One-EdgeGuard	4
Product Specifications	5
Manual Handling.....	6
Safety On Site	7
General Rules For Safety.....	8
Main Components	9-11
Ancillary Components	12-13
Installation Guidance	14
Basic Installation Procedure	15-16
Assemblies & End Termination	17-20
Temporary To Permanent	21
Calculation Of Wind Loading	22

GUIDANCE NOTE

- This manual is valid only for the use of Genuine EdgeGuard All-In-One system manufactured and supplied by Altrad Hire & Sales.
- You should **read** and **ensure** you understand this manual in its entirety prior to commencing work.
- **Only trained and competent operatives should erect, dismantle or modify the EdgeGuard All-In-One system at all times.**

DISCLAIMER:

Altrad Hire & Sales reserve the right to alter or amend without notice the design and / or specifications of any of the equipment forming part of the EdgeGuard All-In-One system, in the interests of improvement.

Whilst Altrad Hire & Sales and the author have made every reasonable effort to ensure that the information contained within this user guide is correct at the time of printing, you should be aware that Altrad Hire & Sales and the authors do not accept any liability for any inconvenience, loss or damage caused by the result of any inaccuracy, or omission, within this publication.

About All-In-One EdgeGuard

The All-In-One EdgeGuard system is a fully galvanised, freestanding, counterweighted edge protection system with fixed and folding options. Fast and easy to install with a minimal amount of components and tools required, it is the perfect system for use during the maintenance or refurbishment of flat roofs.

Altrad Hire & Sales have further improved EdgeGuard, our market-leading permanent roof edge protection system, so that it offers even greater compliance and flexibility over its predecessor. With fewer components and quicker installation times, its modular design ensures adaptability and ease-of-use.

The system is now even more robust, making All-In-One EdgeGuard the ultimate in permanent or temporary roof edge protection. Whenever people require access to, or work on a roof, there is a need for All-In-One EdgeGuard.

This cost-effective guardrail solution meets and exceeds all Health & Safety regulations and relevant British and European Standards. It is a system that performs as good as it looks. Tough, easy to erect and virtually maintenance free, this is a long-lasting safety solution which provides leading edge protection in both permanent and temporary situations.

How does it work? All-In-One EdgeGuard is a freestanding guardrail with an anti-slip rubber mat fixed to the sole of the base, ensuring there are no adverse effects on the roof surface. Its unique design removes the need for unsightly counterbalance weights, with the added benefit of reducing trip hazards.

With options to mechanically fix if required, or a folding option which is an aesthetically pleasing solution for listed buildings (among others), the All-In-One EdgeGuard system is the number one answer for edge protection.

Product Specifications

Permanent EdgeGuard edge protection products are designed to meet the requirements of BS 13700 : 2021

This British Standard specifies requirements for the design, performance, testing, inspection, marking, and instructions for use of manufactured freestanding permanent guardrails that rely on mass and friction and that are intended to protect workers from a fall hazard.

These guardrails are not fixed to a structure.

Configuration of the EdgeGuard All-In-One System to BS 13700 : 2021

The principal guardrail height shall be a minimum of 1100 mm from the top of the principal guardrail to the walking surface - tolerance range of $\pm 2\%$.

Intermediate guardrails shall be located so that the gap between any two rails shall not exceed 470 mm - tolerance range of $\pm 2\%$.

The gap between the lowest intermediate rail and the walking surface shall not exceed 530 mm - tolerance range of $\pm 2\%$.

D End sections of railing at the ends or corner shall not extend more than 500 mm beyond the last vertical post / counterweight in a run.

Maximum tested roof pitch for the system is 10 degree slope.

All units within the standard have a tolerance range of $\pm 2\%$.

Design shall be carried out in accordance with the European Standards for structural engineering, including:

- For steel: BS EN 1993-series, part 1-1 to 6;
- For aluminium: BS EN 1999-series, part 1-1 to 1-5;
- For design: BS EN 1990;
- For wind: BS EN 1991-1-7:2006+A1:2014

Handling, Fittings, Torque Settings, and Tolerances

Handling - Permanent EdgeGuard components are designed for ease of use and all of the standard system components weigh 25 Kg or less.

Fittings are a blackheart malleable iron casting manufactured to BS EN 1562:1997 using grade B32-10 material with a hot dipped galvanised finish to BS EN 1461:1999. All fittings are supplied with grub screws that have been coated in a Dacromet® anticorrosion finish. The grub screws can be tightened with an Allen key, however, if fully tightened using a ratchet key to a torque of 4.1kg/m (29ft/lb) the grub screw is capable of withstanding an applied slip load of 900kg.

Tolerances -

A general manufacturing tolerance of ± 10 mm applies to all fabricated EdgeGuard components.

Manual Handling

The following basic rules should be adhered to when manually handling the EdgeGuard All-In-One system and associated components.

- Plan lay down / storage areas in advance, to reduce the distance materials have to be manually handled.
- Always check the transit route before manual handling, to ensure that it is suitable and free from obstructions and any tripping hazards.
- When handling long materials, beware of damaging property, overhead electric lines, other people and moving vehicles.
- Only tackle loads that can be reasonably handled by the individuals involved – i.e. consider personal physical capabilities.
- Manual handling operations should be eliminated where possible, by using mechanical handling equipment and manual handling aids whenever possible. These include light-lines, gin wheel, forklifts and cranes etc.
- Use the correct knots and hitches if using rope to lift equipment.

Note: Details relating to manual handling and what should be considered can also be found in the latest edition of the NASC guidance note SG6 – “Manual Handling in the Scaffolding Industry.”

Although All-In-One EdgeGuard is not a scaffold product, SG6 contains details which may be pertinent when manually handling this system.

GUIDANCE NOTE

Always use the correct kinetic handling technique:

- Make sure your feet are on a firm level base, a comfortable distance apart (Approx. 300mm).
- Use your legs and not your back to bend.
- Raise your head slightly and tuck in your chin to keep your spine straight.
- Avoid turning / twisting the trunk of the body.

Safety On Site

As is the case with any guardrail system, only trained and authorised operatives should carry out the erection, dismantling or modification of an EdgeGuard All-In-One structure.

Consideration must always be given to those that may be affected by the works being carried out. To ensure that the highest standards of safety performance are maintained, consideration should be given to the following:

1. Altrad Hire & Sale's All-In-One EdgeGuard edge protection products must always be used together with the applicable Product User Guide.
2. Always carry out an assessment and produce a Method Statement prior to the installation of Altrad Hire & Sale's All-In-One EdgeGuard System.
3. To ensure safety in the workplace, always consider the following:
 - i. Plan the Fall Protection at an early stage.
 - ii. Ensure the competency of all operatives.
4. Arrange suitable and safe, access & egress to and from the workplace. Stair access towers or ladders must be provided for all working platforms on temporary access structures, such as scaffolding. Staircase towers provide safe and convenient access for operatives and materials. Staircases should be the preferred choice for access. For shorter duration projects where the use of ladders is acceptable for access, ensure they are founded on a solid base and are securely fixed at the top.
5. On temporary access structures (such as scaffolding), do not overload the working platforms with any materials. If you require to stack large quantities of material at platform level, then a suitable loading tower, capable of sustaining all anticipated loads, should be utilised.
6. All working platforms on temporary access structures (such as scaffolding) must be complete with double guardrails and a toe board, and free from trip hazards or projections. Where there is a risk of items falling, the use of the brick guards should be considered. All scaffolds must be erected in strict accordance with their user guide, the current edition of the NASC's Guidance Note TG 20, or bespoke design.
7. Any unauthorised interference of temporary access structures should be immediately reported to site management, with any incomplete or unsafe parts of the structure being clearly marked and access restricted.
8. All EdgeGuard All-In-One components require visual inspection before use. Only use products that have been previously inspected and are deemed safe to use, **NO** damaged equipment should be used. Any equipment found damaged should be immediately set aside in a quarantined area, clearly marked and senior management informed.
9. Maintenance and repair procedures should only be carried out by qualified / approved personnel.
10. Keep the assembly area tidy, clean and safe.
11. Only use tools intended for the work to be performed.
12. Tighten all grub screws and bolts, while ensuring all surfaces are free from damages.
13. Always wear appropriate PPE with Hi-Vis where required.

General Rules For Safety



Always

- **Always** ensure all who erect, adapt and dismantle the EdgeGuard system are trained and competent to do so.
- **Always** ensure all risk assessments and method statements have been carried out, then communicated to those concerned, and understood.
- **Always** ensure that there is adequate storage space for the materials.
- **Always** ensure that there is clear access to the work area and that the surface is suitable for the EdgeGuard system.
- **Always** work to current Health & Safety guidelines and regulations.
- **Always** ensure loads are evenly distributed.
- **Always** ensure EdgeGuard system inspections are carried out and recorded as per current legal requirements.
- **Always** ensure that all defects are notified to the site management immediately.



Never

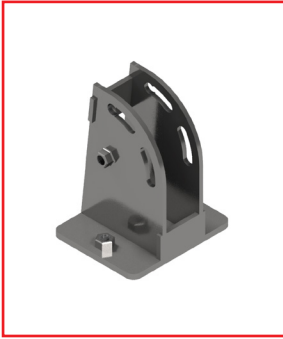
- **Never** let untrained persons erect, modify or dismantle the EdgeGuard system.
- **Never** create gaps in the EdgeGuard system by removing guardrails or toe boards.
- **Never** remove restrictions or warning signs.
- **Never** add sheeting or netting to the EdgeGuard system without prior approval.
- **Never** use damaged materials.
- **Never** allow unqualified / unapproved personnel to repair damaged equipment.

GUIDANCE NOTE

Safety is no accident. Don't risk it – if in doubt ask!

The information given in this EdgeGuard All-In-One user guide relates solely to genuine EdgeGuard equipment supplied by Altrad Hire & Sales.

Main Components



Folding Socket Base

An adaptable base unit, can be used in a fixed upright position or folded flat. This component is bolted directly to the Plain 800mm Countersunk Counterweight to form the base of the system. It can also be mechanically fixed to roofs and parapet walls to provide folding edge protection.

Surface Finish: BS EN ISO 1461:2009 Hot dip galvanized

Code	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
199805	132	124	186	2.9

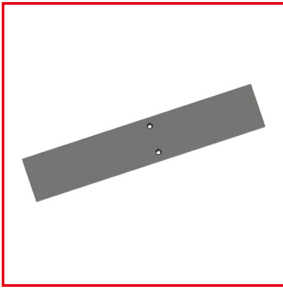


Vertical Post

The vertical of the system, for use with Folding Socket Base and the Right Angled Spigot Connector.

Surface Finish: BS EN ISO 1461:2009 Hot dip galvanized

Code	Length (mm)	Wall (mm)	Ø (mm)	Weight (kg)
199815	1100	3.2	48.3	3.6

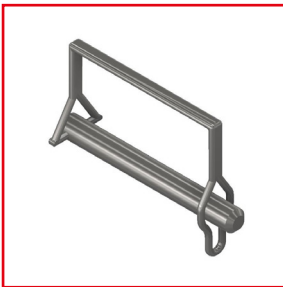


Plain 800mm Countersunk Counterweight

The counterweights are drilled and countersunk to accept M12 Cap Head Set Screws. These screws can be used to bolt the Folding Sockets Bases into place.

Surface Finish: BS EN ISO 1461:2009 Hot dip galvanized

Code	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
199800	800	150	20	18.8

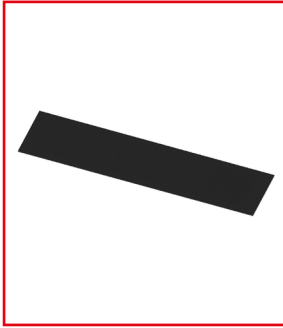


Quick Release Locking Pin

Manufactured from Grade 8.8 Steel, these special M12 x 70mm quick release pins are bright zinc plated.

Code	Length (mm)	Width (mm)	Ø (mm)	Weight (kg)
149708	76	60	12	0.5

Main Components



Styrene Rubber Mat

Membrane / roof protection System Each EdgeGuard system is installed with SBR rubber matting bonded to the underside of the Counterweight Units.

This protects the roof surface from damage, and transference of any heat or direct contact with any system components.

Surface Finish: SBR - Ribbed Styrene Butadiene Rubber

Code	Length (mm)	Height (mm)	Weight (kg)
199604	800	3	0.5

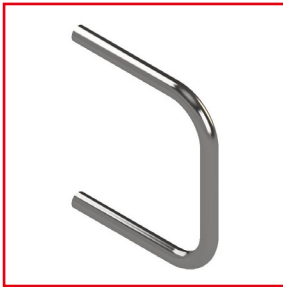


Horizontal Guardrail Tube

Within the temporary system, the Guardrail is formed using a special light-weight tube. This tube forms both the principle and intermediate guard rails of the EdgeGuard All-In-One Temporary system.

Surface Finish: BS EN ISO 1461:2009 Hot dip galvanized

Code	Length (mm)	Wall (mm)	Ø (mm)	Weight (kg)
199820	3000	1.8	48.3	6.2



Standard D-End Termination

Standard D-End Termination for the EdgeGuard All-In-One system.

Surface Finish: BS EN ISO 1461:2009 Hot dip galvanized

Code	Length (mm)	Height (mm)	Weight (kg)
199830	500	500	5.0



End Cap

Used to Cap off Vertical Post as required.

Code	Length (mm)	Height (mm)	Weight (kg)
199604	800	3	0.5

Main Components



Variable Height Tube Spigots

The M16 Grub Screws to the back of the Tube Spigots allow the height of the horizontal rails to be altered as required to meet British Standard Specifications for over all rail heights and gaps between rails. Spigots also have a reversable feature.

The M16 Grub Screws to the front of the spigot accepts two horizontal rails that can be jointed inside the spigot.

There are no requirements for cuts or additional jointing sleeves.

Code	Length (mm)	Width (mm)	Ø (mm)	Weight (kg)
199810	260	150	60.3	1.8



90 Degree Elbow

Used to return system around a corner.

Code	Weight (kg)
199607	0.77



2-Way Swivel Elbow

Used to return system around a corner.

Code	Weight (kg)
199631	1.05



Inline External Tube Connector

Used to return system around a corner.

Code	Weight (kg)
199609	0.64

Ancillary Components



333mm / 400mm Roof Fix Plate

EdgeGuard has a specially designed universal 333mm to 400mm top fix plate, which is used where a mechanical fix is required to metal cladding roofs. Roof Fix Plates are clamped or rivetted to the roof surface and a butyl strip is used to seal and protect the surface.

With a fully galvanised finish, a range of standard fixings (such as S5 standing seam clamps or Q clamp base flanges) can be used as the connection point for the vertical posts.

Note: It is advised that technical assistance is sought for all fixed and folding systems.

Code	Weight (kg)
199835	4.3



Base Flange

Mechanical fixing base plate, used when securing Vertical Posts to a concrete floor.

It is recommended that suitable concrete screws or alternatively expansion anchors are used to fix to concrete, while chemical fix anchors are used with double skin brickwork.

Also used with the 333mm / 400mm Roof Fix Plate

Surface Finish: Galvanised to BS EN ISO 1461

Code	Weight (kg)
199613	1.38



Wall Plate End Terminations to Structures

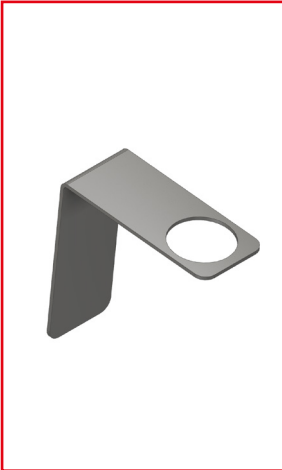
Used to secure horizontal rails to solid walls, when considering end terminations to structures, i.e. mechanical fixing.

It is recommended that suitable concrete screws or alternatively expansion anchors are used to fix to concrete, while chemical fix anchors are used with double skin brickwork.

Surface Finish: Galvanised to BS EN ISO 1461

Code	Weight (kg)
199608	0.68

Ancillary Components



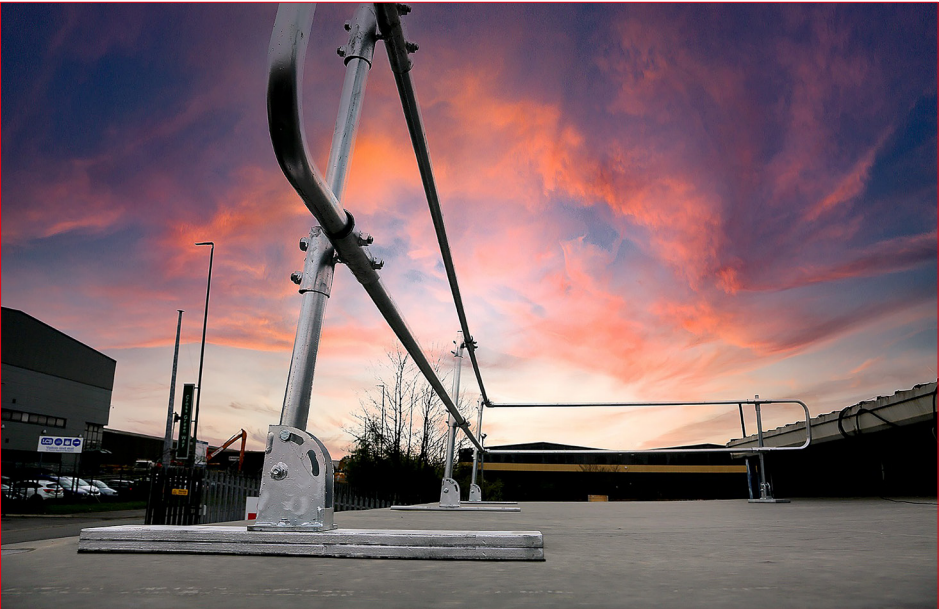
Toe Board Clip

EdgeGuard Systems are designed to work on uneven surfaces such as roofs and in some cases it will be required to cut, joint and notch toe board systems.

Toe Boards for this application are not generally supplied as part of the system. However, there is a bespoke toe board clip, which can be used as required. They have a galvanised finish and can be drilled to accept any suitable toe board material. The clips are fully adjustable with an maximum internal size of 63mm, to a minimum width of 30mm.

Clips are also reversible, so toe boards can be mounted both internally or externally.

Code	Length (mm)	Height (mm)	Weight (kg)
199825	150	150	0.54



Installation Guidance

This section describes the basic installation procedures for All-In-One EdgeGuard (Permanent).

As with all edge protection systems, only trained, competent operatives should install, dismantle or modify EdgeGuard.

Prior to commencing work, make sure all method statements, risk assessments and permits are in place.

Ensure that the surface EdgeGuard is to be built on is level and firm and capable of taking the imposed load of the completed system.

It is recommended that installation of the EdgeGuard system is carried out by a minimum of two operatives.

BS 13700:2021 states that, when complete, a permanent EdgeGuard structure is required to be inspected by a competent person:

- Prior to use
- Every year from the date of handover.
- After a significant event (such as adverse weather or any event likely to have affected its strength or stability).

Checking

The installer should continuously check the edge protection during assembly. A final inspection must be made once assembly is finished, prior to hand over.

All-In-One EdgeGuard meets the requirements of BS 13700:2021, where, within the finished structure;

- The principal guardrail height is a minimum of 1100mm, measured perpendicularly from the top of the principal guardrail to the working surface.
- Intermediate guardrails are located so that any gap between it and the principle guardrail does not exceed 470mm and the distance to the walking surface does not exceed 530mm.

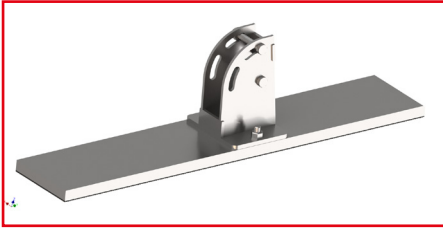
Note: In the case of a folding application, please contact your local depot for installation advice.

Basic Installation Procedure

Step 1

Using the appropriate sized set screws, connect the folding socket to the Plain 800mm Countersunk Counterweight.

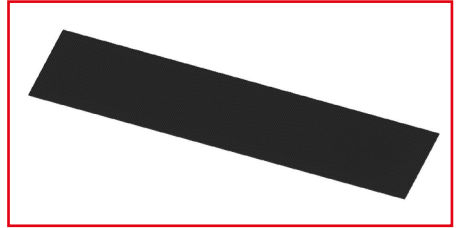
Note: At an end termination point, unless another counterweight/base/post combination is connected to the guard rails within 1.5m of the termination point, the counterweights must be doubled on the end post base assembly.



Step 2

After assembly of any counterweight (including double ends) ensure mats are on to the underside of the bases ensuring they are firmly positioned and secured.

It is recommended that end counterweight assemblies are built insitu if possible to limit any manual handling.



Step 3

Connect the vertical post to the Folding Socket Base using the appropriate sized set screw.

Note: The post can be held at the require position either by using the Quick Release Locking Pin or an M12 set screw and lock nut set.



Step 4

Slide two variable height tube spigots over the vertical tube one after another, in the case of a permanent installation, the horizontal section should be positioned to the top.

Now set the guardrail height by locating the upper of the two grub screws, within the vertical part of the tube spigots, into the predrilled holes in the vertical post. Using an allen key, the lower grub screw is then tightened against the wall of the vertical post, to secure in place.

Repeat Steps 1 to 4 for the next, and each subsequent post.



Basic Installation Procedure

Step 5

Place two post / counterweight assemblies in their desired positions, 3.0m apart.

Whilst holding the first post, with assistance from another operative, slide 3.0m guardrail tubes through the top and mid-rail spigots from the direction of the second post. Now slide each tube in the opposite direction, until both ends of each tube are half-way through the spigot.

Make sure the rail is level and tighten up the grub screw using an Allen key.

To continue, take a further post / counterweight assembly, place in the desired position and connect to the second post /counterweight using two further guardrail tubes, again ensuring the tube ends are half-way through the spigots.

Make sure the rail is level and tighten up the grub screws using an Allen key, then continue the operation as described until the EdgeGuard is complete.

A visual check should now be made as to the line of the guardrail to check that it is straight along its length and parallel to the building, parapet or walkway.

Note: In the case of a folding installation, it is recommended that guardrail joints are positioned within the bay, to aid the folding procedure.

Inline external tube connectors provide the connection detail for mid-bay tube to tube connections. It is acceptable for these joints to be within the same bay for both principle and mid-guardrails.



Assemblies & End Termination

Universal Fixed / Folding Base Unit

EdgeGuard in Fixed Position

2 off M12 x 80mm Long Set Screw holds EdgeGuard Vertical Post in position.

Bolt Fixing Kit for use in Fixed Position

2 off M12 x 30mm long Caps Head Set Screws, with 10mm Allen key socket head.

2 off M12 X 80mm long, 19 mm Hex Head, Set Screws

4 off M12 Locking Nuts

4 off M12 Washers

EdgeGuard in Folding / Quick Release Mode

1 off M12 x 80mm Long Set Screw and 1 off M12 x 70mm Quick Release Spring Pin holds EdgeGuard Vertical Post in position.

Bolt Fixing Kit - Per Base For Use in Folding / Quick Release Mode

2 off M12 x 30mm long Caps Head Set Screws, with 10mm Allen key socket head

1 off M12 X 80mm long, 19 mm Hex Head, Set Screws

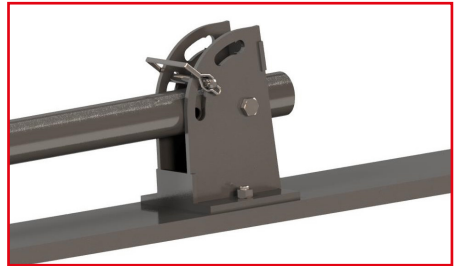
3 off M12 Locking Nuts

3 off M12 Washers

1 off M12 x 70mm Quick Release Spring Pin



EdgeGuard In Fixed Position - Quick Release Pin prevents accidental / wind uplift.



EdgeGuard In Folded Position - Quick Release Pin prevents accidental / wind uplift.



EdgeGuard In Upright Position - Quick Release Pin locks edge protection in place.

Assemblies & End Termination

Double Counterweight End Termination

EdgeGuard in Fixed Position

2 off M12 x 80mm Long Set Screw holds EdgeGuard Vertical Post in position.

Bolt Fixing Kit for use in Fixed Position

2 off M12 x 50mm long Caps Head Set Screws, with 10mm Allen key socket head.

2 off M12 X 80mm long, 19 mm Hex Head, Set Screws

4 off M12 Locking Nuts

4 off M12 Washers

EdgeGuard in Folding / Quick Release Mode

1 off M12 x 80mm Long Set Screw and 1 off M12 x 70mm Quick Release Spring Pin holds EdgeGuard Vertical Post in position.

Bolt Fixing Kit - Per Base For Use in Folding / Quick Release Mode

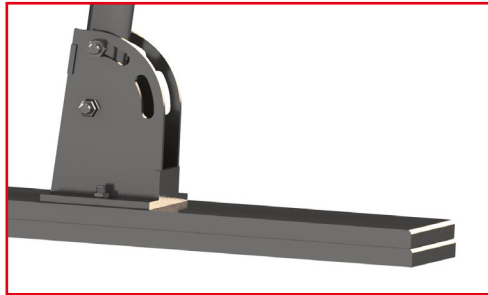
2 off M12 x 50mm long Caps Head Set Screws, with 10mm Allen key socket head

1 off M12 X 80mm long, 19 mm Hex Head, Set Screws

3 off M12 Locking Nuts

3 off M12 Washers

1 off M12 x 70mm Quick Release Spring Pin



With the double counterweights in place, be sure to lower the horizontal rails by 20mm, using the variable height tube spigots.

Assemblies & End Termination

D-Ends

The standard D End Termination for the EdgeGuard All-In-One system is an aesthetically pleasing but optional method to complete a run of All-In-One EdgeGuard.

Both ends of the D-End is placed within the upper and lower Variable Tube Spigots, with the grub screws being tightened as normal.



Options for Mechanically Fixed & Folding Arrangements

EdgeGuard can be mechanically fixed to a wall or concrete upstand. The folding base unit will accept M10 threaded rod or M10 mechanical fixings.

Please seek advice from your local Altrad Hire & Sales depot on fixing types and upright centres required, which are dependent on the fabric of the structure to be fixed to.

Bolt Fixing Kit for use in Fixed Position

2 off M12 X 80mm long, 19 mm Hex Head, Set Screws

2 off M12 Locking Nuts

2 off M12 Washers

2 off site specific resin / mechanical fix kit

Bolt Fixing Kit for use in Folding/Quick Release Mode

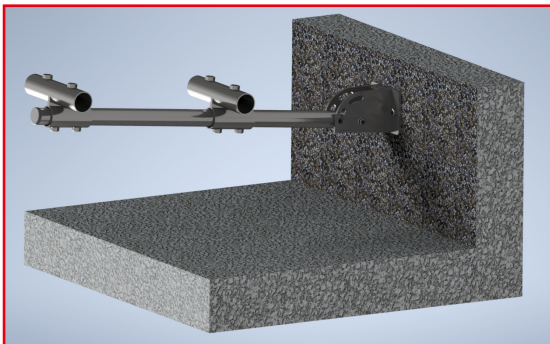
1 off M12 X 80mm long, 19 mm Hex Head, Set Screws

1 off M12 Locking Nuts

1 off M12 Washers

1 off M12 x 70mm Quick Release Spring Pin

2 off site specific resin / mechanical fix kit



Assemblies & End Termination

Options for Access Gates

To enable access and egress through the All-In-One EdgeGuard System, there are many solutions available, which still provide adequate edge protection in accordance with BS 13700:2021. Some of which are detailed below; for further details please contact your local depot.

Q-Clamp Fittings

An easy to assemble, on-site solution. Each gate consists of the following components:

3 off small Tee fittings; code 199610

2 off large Tee fittings; code 199617

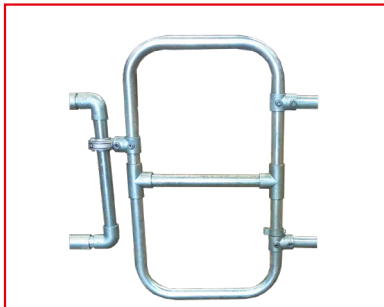
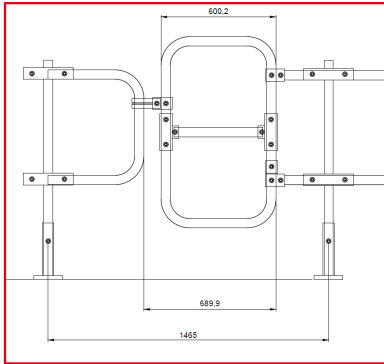
1 off gate eye; code 199638

2 off D End; code 199570

1 off Alloy Claw; code 199550

1 off tube – 484.2mm long

The gate requires two post / counterweight assemblies either side of the gate at 1465mm max.



Pre-Fabricated Sprung Gates

A pre-fabricated, fully galvanised self-closing safety gate designed to easily fit into the EdgeGuard System.

The gate is spring loaded so will automatically close behind the user.

Supplied with hinge, post and slam post, lockable with padlock through Ø 15mm hole.

Height 1100mm when tube clamp fitted

The gate requires two post / counterweight assemblies either side of the gate at 1070mm centres.



Temporary To Permanent

As there are different requirements for temporary and permanent counterweighted edge protection systems, it is often the case that there will be different guardrail systems employed during and after the construction phase.

With Altrad Hire & Sale's All-In-One EdgeGuard system, a simple adjustment is all that is required to convert temporary to permanent and meet all mandatory standards.

When installing the EdgeGuard system for temporary use during construction, the lower variable height tube spigot is placed over the post, with the horizontal section to the bottom. and secured as before, with the upper of the two grub screws, within the vertical part of the tube spigots, placed into the predrilled holes in the vertical post. Using an allen key, the lower grub screw is then tightened against the wall of the vertical post, to secure in place.

Using a D-End and / or tape measure to set the required gap height of 470mm, place the upper variable height tube spigot over the post in the opposite direction to the lower spigot. Both grub screws are now tightened against the wall of the post.

It is now a simple operation, once all temporary works are completed, to raise the guardrail to the permanent position.

Loosen the grub screws on both variable height tube spigots and lift the guardrails into the permanent position, with the top grub screw on the upper spigot locating into the pre-drilled hole of the vertical post, and the remaining three being tightened against the wall of the vertical post. It is recommended that a tape measure and a spirit level are used to maintain the requirement of a 470mm gap.

Note: Only the variable height tube spigots on one post may be loosened at the same time.

It is recommended that the lighter-weight permanent guardrail tube is used, rather than scaffold tube, in temporary to permanent scenario. This avoids the need to swap tube rails during the conversion process, making the operation more efficient.



EdgeGuard in the temporary position.



EdgeGuard converted from temporary to the permanent Position.

Calculation Of Wind Loading

External edge protection shall be capable of sustaining a maximum velocity pressure which is dependent on the factors detailed in **A)** to **G)**. This shall be greater than the working wind load.

Note: The edge protection is not in use in a windstorm and therefore, for design purposes, it is assumed that the maximum wind loads act at the same time as out-of-service conditions

Out of service condition assumes no loading (persons) other than wind. The effects of maximum velocity pressure on the structure shall be taken into account, except in cases where additional safety components are used, i.e. in the working wind condition. If the system includes a toeboard in the out of service condition, the effects of maximum velocity pressure acting on the system and structure shall be included in the wind calculation.

To determine the maximum velocity pressure the following information shall be recorded:

- A)** Site location (postcode);
- B)** Site altitude (in metres above sea level);
- C)** Height above ground (installation level);
- D)** Type of site;
 - i)** Town;
 - ii)** Country;
 - iii)** Coastal;
- E)** Closest distance to the sea;
- F)** Topographical characteristics; and
- G)** Design life.

Probability factor = 1 for 50-year design life;
0.96 for 25-year design life.

Note: The maximum peak velocity pressure can be defined as the theoretical pressure in unobstructed flow corresponding to the wind gust of 1 second duration having a 0.02 probability of being exceeded during the life of the structure.

It may be calculated with varying degrees of complexity (and resultant economy), using the guidance in BS EN 1991-1-4 as modified by the UK National Annex thereto either by hand calculation or using computer software.

Wind load calculations

Edgeguard is tested to meet the wind load requirements of 600 Nm² which covers most wind conditions in Europe.

Using the guidance in BS EN 1991-1-4 as modified by the UK National Annex by using computer software, the wind velocity pressure calculation represents a wind speed of approximately 32 m/s. (70 mph).

Warning

You should never increase the effective area of the edge protection, for example by using scaffold sheeting or plywood, as they will increase the load on the edge protection at a given wind strength. Never make changes without first checking with Altrad Hire & Sales so that the system is designed to meet any additional wind loading.

Ice and Snow

The EdgeGuard Edge Protection system is not designed for exposure to static or dynamic loads resulting from ice and snow. Always keep the Edge Protection free from additional loading resulting from ice and snow.

Notes



 Find Your Nearest Branch:

Simply scan the QR code and input your postcode by clicking on 'Find your local branch', our website will then show the nearest branch to your location.



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