



SEPARATING PEOPLE FROM HAZARDS



# About Kee Safety

Kee Safety is a leading global supplier of safety barrier components, bespoke systems for roof edge protection and fall prevention and safe access solutions; all designed to separate people from hazards. Kee Safety strives to provide clients with the highest level of safety solutions, and has proven to do so, with its products being used to protect people in many applications and countries around the globe.

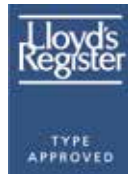
Kee Safety has been trading in the Asia Pacific region since the 1980's, supplying the aviation, power, oil and gas, commercial and government sectors. In February 2014, Kee Safety opened its regional office in Singapore. With a local office and warehouse, Kee Safety Singapore Pte Ltd is able to provide health and safety professionals with full access to its complete product range and design services, combined with short delivery lead times.

## Products

Kee Safety offers one of the most extensive safety product ranges on the market. Not only are the products designed using high quality materials, they also comply with relevant international standards.

## Advice

Kee Safety aims to eliminate hazards, prevent falls and reduce the consequences of a fall. To do so, the company supports its customers with not only a large product range, but also expert advice and services.





# Site Survey, Design & Installation

From our base in Singapore, Kee Safety is able to undertake site surveys and provides a full design and installation service for any type of railing, safe access or fall protection system in the Asia Pacific Region.

Whether it's dealing with new builds, refurbishment or the upgrade of existing structures and developments, Kee Safety can provide safety compliant guardrail and handrail designs for either internal, external, ground level, roof level, back of house or front of house installations. If a fall protection system or safe access solution is required, we can visit the location to execute a full inspection, including a measuring service, thus ensuring the best safety system, compliant with the relevant standards, is recommended.

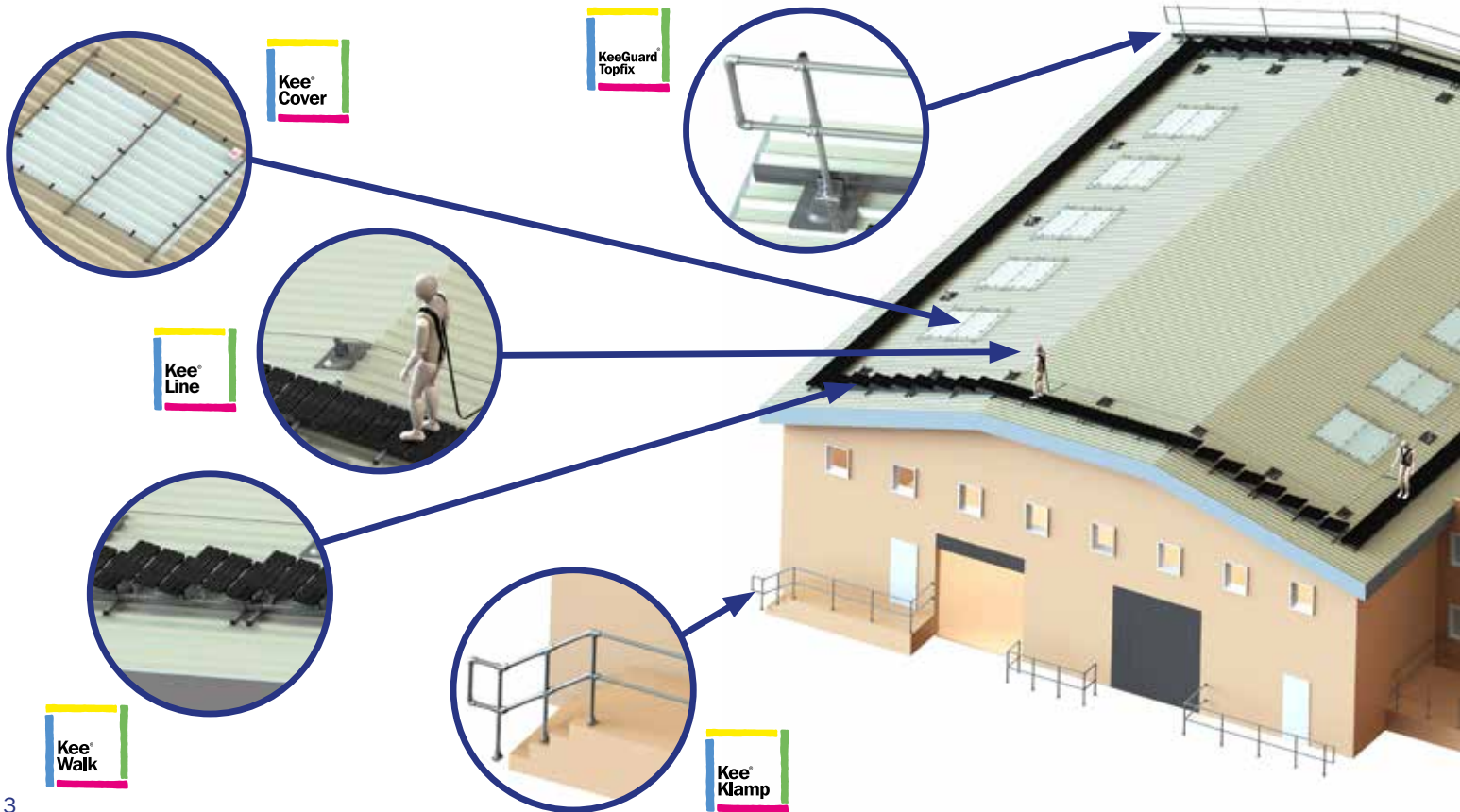
We have our own team of installers with a vast amount of experience in installing handrail, guardrail and fall protection systems, enhanced by a full technical design service.

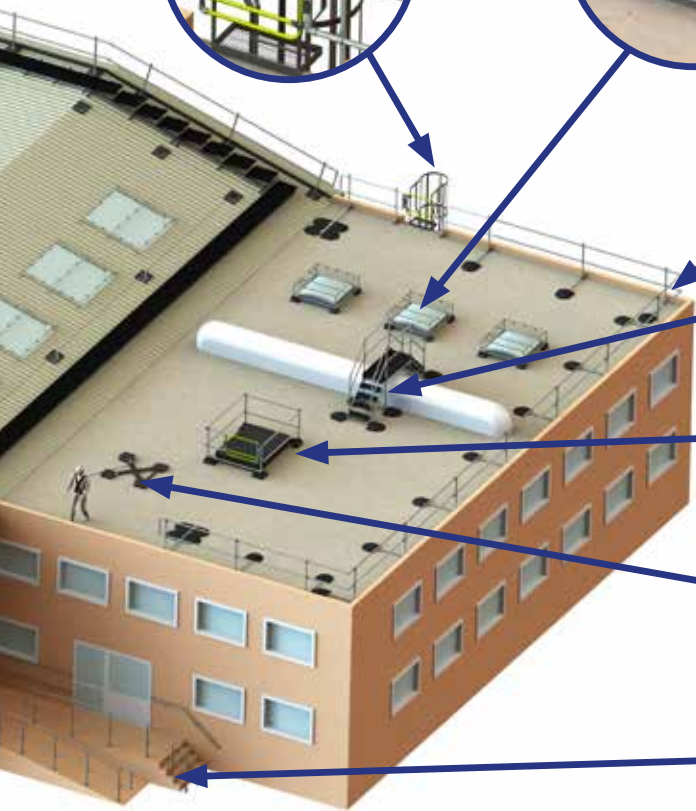
Kee Safety has worked on an extensive range of projects with some of the region's best known contractors and has consistently delivered projects on-time and within budget. The type of projects we have undertaken are:

- Cost estimates specific to project needs
- Technical advice and support
- Site inspection service
- Design solutions in CAD
- Installation service

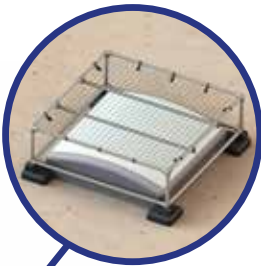


# Safety Solutions For Working At Height





**Keer Gate**



**Keer Dome**



**Keer Guard**



**Keer Walk**



**Keer Dome**

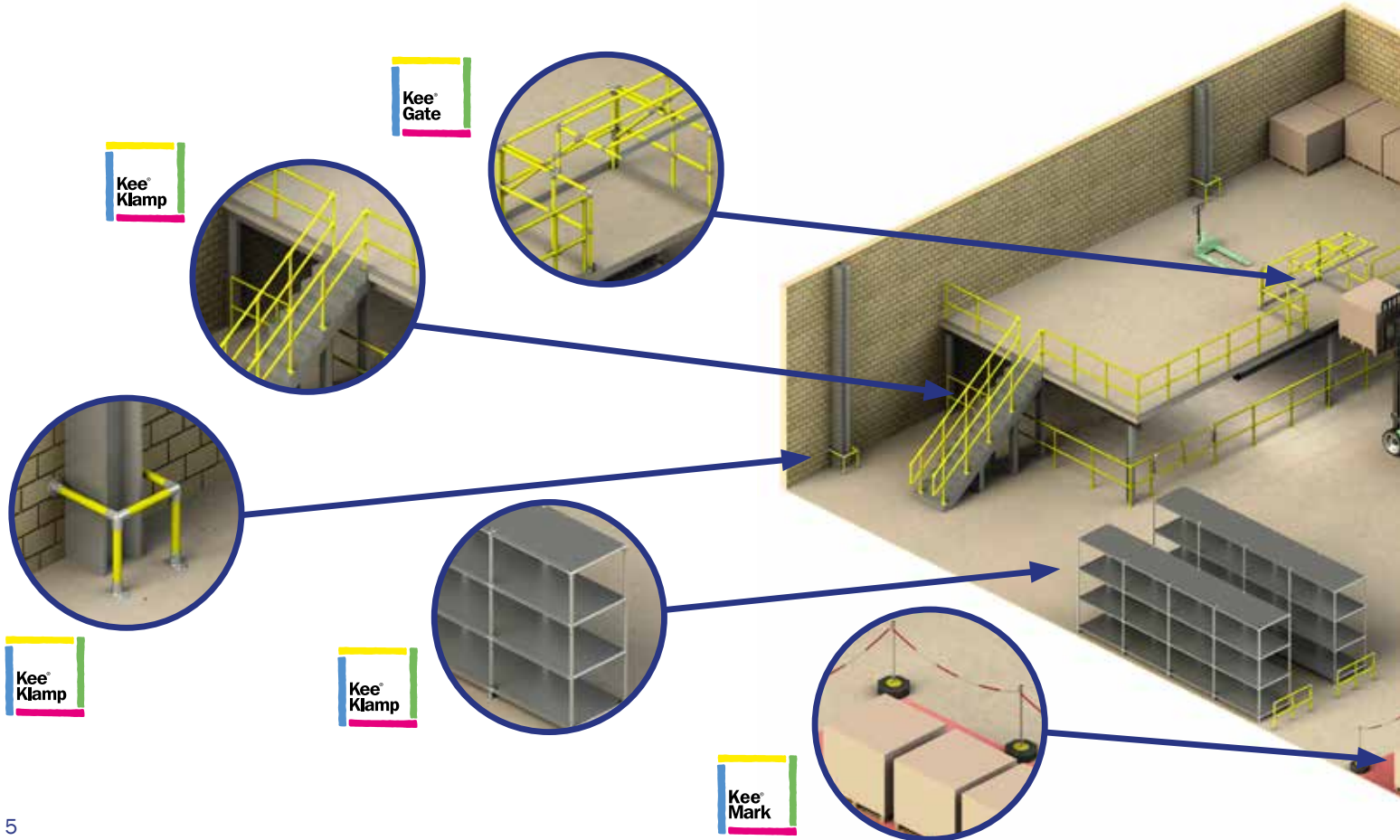


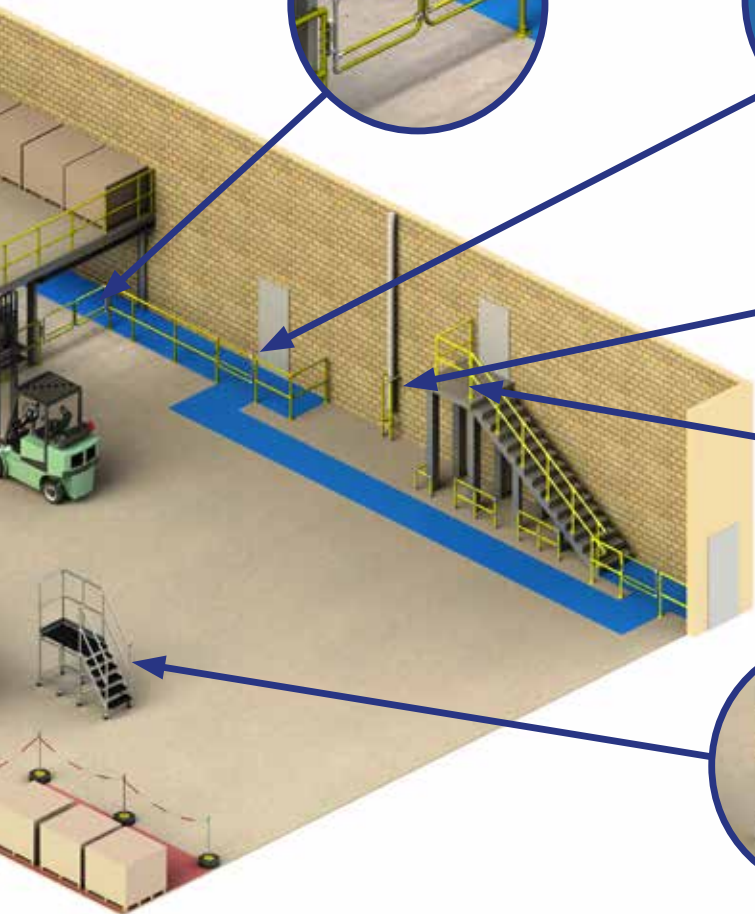
**Keer Anchor**



**Keer Access**

# Safety Solutions For Workplace Hazards

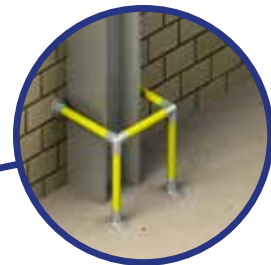




**Kee'  
Gate**



**Kee'  
Gate**



**Kee'  
Klamp**



**Kee'  
Klamp**



**Kee'  
Lite**



# Contents Page

<b>Product</b>	<b>Page</b>
Free Standing Roof Edge Protection	8
Edge Protection For Cladded Roofs	10
Portable Roof Edge Protection	12
Ladder Kit Guardrail Kit for Ladder Access Points	14
Horizontal Life Line	16
Overhead Life Line System	18
Portable Deadweight Anchors	20
Roof Top Walkways	22
Roof Top Walkway with Guardrail	24
Roof Top Step-Overs	26
Skylight Fall Protection	28
Rooflight Protection	30
Fragile Roof Protection	32
Safety Eyebolts	34
Self Closing Safety Gates	36
Pallet Gates	38
Bespoke Access Platforms	40
Quick Assembly Safety Railings	42
Components for Safety Barriers	44
Aluminium Components for Barriers	46
Handrails for Elderly & Disabled	48
Safe Steelwork Connections	50







# Free Standing Roof Edge Protection

The KEEGUARD range of free standing guardrail systems has been designed specifically to provide permanent edge protection for areas where regular access for maintenance and inspection is required.

The range has been developed to suit specific requirements and includes the standard design with vertical legs, raked and radiused systems, as well as a collapsible version for areas where a more discreet form of protection is required.

Each system is based on a simple cantilevered design which provides unrivalled strength, stability and safety, and overcomes the problem of having to drill and puncture the roof membrane which can lead to potential water damage and noise disturbance during installation.

The systems comprise of galvanised tubing joined together using the KEE KLAMP method of connection and can be supplied in steel and powder coated if required. Counterweights are made from 100% recycled PVC and are designed for ease of handling and speed of installation.

All base plates have fluted rubber matting bonded to the underside in order to protect the roof membrane. Additional protection may be required depending on the roof membrane. In these instances it is recommended that sacrificial pads are placed under components which come into contact with the roof membrane.

All Kee Safety's free standing guardrail systems have been tested to EN 13374 Class A and OSHA.







# Edge Protection For Cladded Roofs

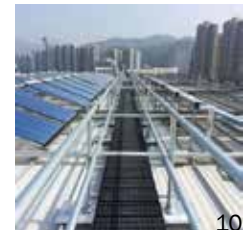
KEEGUARD TOPFIX provides collective roof edge protection specifically for metal profile and standing seam roofs up to 45°.

Pitched cladded roofs have traditionally been protected using personal fall protection systems which are lower in the hierarchy of control ranking.

The new collective roof edge protection system features a base plate with multiple fixing centres which is fixed directly to the profile sheeting via rivets or non-penetrative two-part clamps. This unique plate design allows the system to be fitted to a wide range of profile sheet centres.

The plate also provides the support for the vertical standard leg which can be adjusted from 0° to 11°. The horizontal rails are then simply fitted to the open saddle fittings to provide a complete collective solution.

This roof edge protection system has been tested to EN 13374 Class A and OSHA.







# Portable Roof Edge Protection

KEEGUARD PREMIUM provides an innovative and unrivalled approach to guardrail systems. It is ideal for roofs with limited space such as those where solar panels have been installed.

Designed as a modular free standing system, a key benefit of KEEGUARD PREMIUM is that it does not require counter weights along the full run of the system. This provides the ideal solution for areas where traditional counter weights are unsuitable or potential trip hazards.

The system is suitable for both permanent and temporary applications on roofs, and features unique two part interlocking recycled base weights. These weights can be split to allow a single person to carry the weight, or be carried complete by two people using the moulded handles.

KEEGUARD PREMIUM is fully tested to EN 13374 and OSHA.







## Guardrail Kit for Ladder Access Points

The KEEGAURD Ladder Kit combines KEEGUARD edge protection fixed either side of an existing fixed ladder with a KEE GATE Self Closing Safety Gate to provide safe access onto roofs for maintenance and inspection purposes.

Fixing is quick and easy; the kit has been developed to simply clamp on to the existing ladder. The unique fitting which connects the guardrail to the ladder has been designed to clamp around both flat and tubular stringers with a maximum diameter/width of 75mm.

KEEGAURD Ladder Kit has been designed specifically to provide a 'retro-fit' solution to existing cat/fixed ladders and has been independently tested & CE approved to EN 14122-4.









# Horizontal Life Line

The KEELINE horizontal life line system is the ideal solution to providing fall arrest protection where guardrails are not suitable, or for when a virtually invisible solution is required.

The fall protection system provides complete and continual “hands-free” protection for up to three operatives, when used as a fall arrest system. When an intermediate bracket is encountered, the traveller connecting the operative to the system simply glides over the bracket, without the need to detach from the fall protection system.

KEELINE incorporates PAS (Progressive Absorbing System), making the system’s design totally unique. The shock absorbers, intermediate brackets and support posts are designed to deploy and deform should an operative fall, thus reducing the loadings applied to the building’s structure to below 10kN.

The system can be installed to any steel cladding panel, beam/column structure, solid parapet wall and flat roofs via a support post. The system has been tested successfully to EN 795:2012 “Protection against falls from height anchor devices - Requirements and Testing”.







# Overhead Life Line System

This fall protection system is ideal for situations where overhead protection is required, such as vehicle loading, machine maintenance and access, building maintenance and cleaning and overhead crane access.

KEELINE OVERHEAD has been designed to provide overhead fall protection for up to three users. The system features a permanently attached two wheeled traveller which passes smoothly over the intermediate brackets, even when the user is attached to a fully extended inertia reel. KEELINE OVERHEAD can be configured to allow single or multiple spans of up to 30m in between supports and is designed with a higher pre-tension than the standard KEELINE system to reduce line sag and cable deflection.

KEELINE OVERHEAD has been independently tested to the requirements of EN795 TYPE C.







# Portable Deadweight Anchors

Kee Safety's portable deadweight anchor has been specifically designed to provide short term safety for low frequency operations where guardrails are not provided, such as for maintenance of flat roofs or plant and equipment installed at roof level.

Kee Safety's deadweight anchor is extremely compact, portable and easily assembled. The anchor weights are supplied with suction cup rubber boots which protect the roof and increase frictional resistance, enabling the anchor to be used on all roof membranes, even in wet weather.

Kee Safety's mobile man anchor should, as far as is reasonably practical, only be used as a fall restraint system as opposed to fall arrest. The anchor should only be used as a fall arrest system as a last resort and after careful consideration. In this situation, the unit must be used in conjunction with a shock absorbing rope grab device. When used in fall arrest, it is a legal requirement to have a rescue policy and plan in place.

A series of mobile man anchors can also be linked using the KEELINE system. This provides fall restraint protection for operatives while they travel between each deadweight anchor, and fall arrest protection once they are disconnected from the lifeline and connected directly to an individual anchor. This type of installation is ideal if a freestanding solution is required in order to avoid roof membrane penetration, or the roof design is not suitable for structural fixings associated with horizontal life line installations.

KEE ANCHOR deadweight anchor is compliant with EN 795 : 1997.







# Roof Top Walkways

Working on roofs can be extremely dangerous, especially in wet or wintry conditions.

The KEE WALK system provides an anti-slip, level walking surface for safe access to and across roofs. It provides a demarcation route which protects the roof membrane from unnecessary foot traffic and potential damage.

Ideal for use on flat, barrel and sloping roofs, the system's step and traverse options allow access to be created for virtually any roof configuration from 0° to 35°. The system can either be free standing or fixed to the roof covering and features an open tread design to ensure water drains away efficiently.

The modular system provides a simple approach by using standard pre-assembled 1.5 & 3m lengths and standard stair treads of 625mm long by 225mm wide. The unique rotating cam arms allow the stair units to be easily adjusted to the correct angle to ensure a regular rise.

The KEE WALK walkway system is fully compliant to BS 4592 and tested to EN 516 : 2006 "Prefabricated Accessories for Roofing – Installations for roof access – Walkways, treads and steps".









# Roof Top Walkway with Guardrail

The KEE WALK with Guardrail system from Kee Safety is a fall protection solution consisting of walkway and guardrail which can be installed quickly and easily on a wide variety of roofs, including pitched, metal profile and standing seam roofs up to a 35° slope.

It is a safe, compliant and modular approach to guardrail protection and eliminates the fall hazard typically present when workers are exposed to an unprotected edge whilst accessing or egressing a roof top.

KEE WALK walkway with guardrail offers a complete safe and cost-effective, non-corrosive protection of the highest order whilst maintaining simple and quick installs. The system can be used in conjunction with our range of steps, platforms and step-overs when negotiating changes in level.

KEE WALK walkway is compliant to Pre-Fabricated Accessory EN 516 – Class 1-C and the guardrail is compliant to EN 14122-3, EN 13374 & OSHA requirements.







# Roof Top Step-Overs

Suitable for use on a variety of roof types and surfaces including concrete, membrane, metallic and composite, KEE WALK Step-Overs are available in kit format, supplied flat packed with full assembly instructions to allow quick and easy installation.

Our modular Step-Overs are available in 5 standard off-the-shelf kits to accommodate clearance heights of 600mm, 800mm, 1000mm, 1200mm and 1400mm. The kits have a 1m landing and are delivered pre-assembled. Each kit includes a double handrail and toe-boards for added safety, a choice of nylon or aluminium treads and base feet options to suit different roof types.

For low level obstacles on roofs we offer Mini Step-Over Kits, which are available in various sizes.

For a metal profile roof or if there is a height difference between the platform ends, we can design a custom step-over. Our bespoke step-overs can be designed to suit the individual needs of every application, this means that every platform will provide the safest method of access possible.

Kee Safety's Step-Overs are designed in accordance with EN 14122-3 for assured safe operation, and are built using KEE KLAMP fittings with either nylon or aluminium KEE WALK treads to provide an anti-slip walking surface.







# Skylight Fall Protection

KEE DOME is a modular system designed specifically to prevent falls through skylights. Recycled PVC bases lock the posts into position around the perimeter of the rooflight. KEE KLAMP fittings and standard length tubes (1.5, 2.0 & 3.2m) are used to construct a rigid frame around the skylight.

Where building aesthetics are a concern, the KEE DOME MINI provides a less obtrusive solution due to its reduced size. This product can be used on skylights from 1.2m x 1.2m up to 1.8m x 1.8m. This version features smaller recycled PVC bases, tubes and fittings to construct a rigid frame around the rooflight.

The KEE DOME system is compliant to EN ISO 14122 part 3.







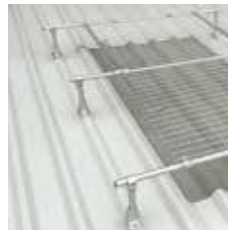
# Rooflight Protection

The KEE COVER range of rooflight protection has been designed specifically for use on metal profile roofs and provides effective protection without blocking the light into the building.

KEE COVER is a component based system, allowing ease of transport of components to the roof and assembly on site. Standard mesh panels are supplied 2m long by 1m wide and sit onto the metal frame which is constructed from KEE KLAMP fittings. 2m (or 1m) long by 1m wide extension panels are available for larger rooflights and skylights. KEE COVER is available in two formats, one that sits virtually flat on the roof surface, and one that is mounted onto small legs to raise it above the rooflight or skylight.

The KEE COVER system has been tested to EN 1873 and complies with the ACR Red Book.

**NOTE: Polycarbonate/non fragile rooflights are only deemed to be 'non fragile' during the construction phase of a project. After the construction phase they are considered to be fragile.**









# Fragile Roof Protection

Our range of fragile roof access equipment is ideal for providing short term protection for work on fragile or industrial roofs. The range has been specifically designed for use on fragile materials and provides users with safe, easy to assemble working platforms.

## BOARD-WALK

A portable open mesh walkway, which provides access from the eaves to the ridge, by spreading the weight across the support battens. The system is compliant with BS EN 12811-1: 2003.

## MOBILE VALLEY FRAME

A lightweight portable frame with mesh side panels, which allows the user to move freely along valleys, northern lights and box gutter details on fragile roofs.

## ROOF-WALK

A fully guarded rolling work platform mounted onto twin tracks, which enables workers to move freely up and down the roof.







# Safety Eyebolts

External works often require access from inside a premises as well as from the outside; for example, window cleaning or minor maintenance operations. In these cases, safety eyebolts are the most common and user friendly solution to ensuring operative fall arrest safety.

Cleaning windows may expose the window cleaner to potential fall risks; in these instances, Type A safety eyebolts would offer the best solution. Kee Safety's range includes standard eyebolts for use in brick, concrete and masonry, as well as a removable, unobtrusive option enabling the eyebolt to be concealed by a flush fitting cover for more prestigious installations.

Eyebolt specification should only be undertaken by a competent person, in order to ensure that the correct eyebolt is used for the given structure. Re-certification of the product must also be carried out in accordance with BS EN 7883 and EN 365.







# Self Closing Safety Gates

Kee Safety's KEE GATE range of self closing safety gates is ideal for protecting access and egress on rooftops and in industrial environments. Each safety gate is spring loaded so it automatically closes behind the user. This overcomes the potential for human error that is often associated with traditional forms of protection, such as chains or bars, where incorrect usage can lead to the creation of a hazardous void,

Kee Safety's self closing safety gates can accommodate an opening up to 1m wide for the single gate and 2 x 0.9m for the double gate. The gates are fully adjustable - width can be cut to size on-site.

The KEE GATE range has been independently tested to ensure the gates comply with international standards such as EN 13374, EN 14122 Parts 3 and 4 and OSHA.

The KEE GATE range also includes full height gates for ladders. The gates have been designed to comply with BS 4211: "Specification for Permanently Fixed Ladders", which requires gates on ladders to offer the same level of protection as EN 14122 compliant guardrails.

Our gates are available in galvanised steel finish or yellow powder coated.







# Pallet Gates

Kee Safety's KEE GATE PALLET GATES have been designed specifically to allow goods to be moved safely up or down from mezzanines or raised working surfaces.

The range is easy to install or retro-fit to guardrails and barriers where openings need to be protected, such as on mezzanines in warehouses and logistics centres. Each gate is counterbalanced for a positive open and close action, adding to the gate's ease of operation.

KEE GATE PALLET GATES are fully adjustable in width and are available in four different models to accommodate the type of operation required.

The KEE GATE PALLET GATES range has been independently tested to ensure the gates comply with international standards such as EN 14122-3 : 2016 and OSHA.









# Bespoke Access Platforms

Our range of bespoke access platforms allows safe access to areas where off-the-shelf fabricated platforms, or other systems such as ladders or towers, are not appropriate. Kee Safety can design either a mobile or static custom built platform that meets site specific requirements, and provides a safe solution for working at height or safe access around plant and machinery.

Kee Safety's bespoke access platforms are modular in design and available in aluminium or steel using KEE LITE and KEE KLAMP fittings, to provide an extremely secure, robust, corrosion resistant platform. Using off-the-shelf fittings allow us to safely design structures up to a working platform height of 3m, however owing to the tube and fitting construction, we are able to provide totally customised and bespoke solutions for any access or egress requirements.

Utilising off-the-shelf fittings also allow the platforms to be delivered and constructed quickly and easily, with minimal disruption on-site.

Our access platforms are designed to EN1004:2004, BS 1139-6:2005 or PAS 250.







# Quick Assembly Safety Railings

KWIK KIT is a range of permanent safety railing kits that can be quickly and easily installed in any location.

KWIK KIT is available from stock and offers Production, Safety and Maintenance Managers the ability to immediately protect workplace areas, as a result of critical risk assessments or other priority safety issues. There is no need to weld or bend the tube. Pre-assembled uprights not only add to the simplicity, but make installations extremely quick to complete; reducing expensive production downtime.

Rails become increasingly visible when the safety yellow column guards are installed, potentially averting serious structural damage as a result of vehicular impact.

Our safety railing kits are available in nine model types, in galvanised steel or aluminium. Most guardrail configurations can be constructed using a combination of the alternative kits available.

KWIK KIT safety railing kits have been designed to EN14122-3 and OSHA.







# Components for Safety Barriers

KEE KLAMP components offer the most flexible solution for the construction of safety railing, handrail, guardrail and barriers. The KEE KLAMP range comprises a comprehensive selection of simple to use, galvanised malleable cast iron fittings. These fittings allow pre-cut lengths of standard tubing to be connected together to form safety guardrails and other types of tubular framework structure.

All fittings within the KEE KLAMP range incorporate an integral socket screw which locks the fitting securely onto its tube to give an excellent slip load performance. The extensive range ensures that they can also cope easily with any changes in direction or gradient, and easily accommodate requirements for adapting or extending an existing structure.

KEE KLAMP railing systems offer a strong and durable solution to separate people from hazards; they are more resistant to corrosion and can last much longer than fabricated barriers and handrails. They also eliminate the need for welding, cutting, threading or bolting and remove the need for skilled labour and permits for work.

The main KEE KLAMP fittings are TÜV certified for strength, manufacturing quality and consistency.







# Aluminium Components for Barriers

KEE LITE aluminium components offer lightweight flexible solutions for the construction of safety railing, handrail, guardrail and barriers.

Manufactured from a high-grade Aluminium Silicon Magnesium Alloy, KEE LITE fittings are much lighter than ordinary fittings and extremely durable; even in harsh environments.

Aluminium provides high corrosion resistance while the integral KEE KOAT coated grub screws in each fitting, designed to lock the product safely and securely onto its respective tube, deliver an excellent slip load performance. This technology, already well proven in the market leading range of KEE KLAMP fittings, eliminates the need for time consuming welding or specialist installation skills, so helping to reduce structure assembly time and lower project costs even further.

The KEE LITE range has gained TÜV approval for the main components after undergoing extensive testing.









# Handrails for Elderly & Disabled

KEE ACCESS components are used to create safety barriers compliant with disability legislation, e.g. handrails compliant with the requirements of the UK Equality Act and the American Disability Act (ADA).

Handrails are essential in helping many people, particularly those with a disability and the elderly, gain safe access to a building and in order to do this they need to meet some very specific requirements. These include a tube diameter of between 40 and 45mm, provide a smooth and continuous handrail without any sharp edges or snag points, be slip resistant, provide a good visual contrast between the handrail and its background, and not be cold to the touch.

KEE ACCESS fittings have been designed to give a smooth handrail with size 7 tube (outside diameter 42.4mm). All fittings can be powder coated in a choice of RAL colours to meet the visibility and 'not cold to the touch' requirements of the building regulations.

The KEE ACCESS range is ideal for creating new barriers, but the system can also be used as a retrofit solution, due to its add-on components which allow a new handrail to be added on to existing railing systems.







# Safe Steelwork Connections

The BEAMCLAMP and BOXBOLT range of fixings from Kee Safety is a series of products that provide a secure fixing method for structural steelwork. The fixings provide solutions for joining steel together without the need for on-site drilling or welding, to give much more flexibility than traditional methods. The systems provide a guaranteed connection every time without the need for on-site verification, providing that installation guidelines are correctly followed.

## BOXBOLT

BOXBOLT is a fully tested and approved blind fixing solution for connecting in to a steel cavity, whether it be hollow section steelwork or where access is restricted to one side only. BOXBOLT is CE marked and approved for use by Lloyds Register Type and DIBt.

## BEAMCLAMP

BEAMCLAMP is an extensive range of steel to steel clamping products designed for making steel to steel connections without the need for drilling or welding. The system is ideal for areas where drilling or welding is not allowed or access and power is restricted. BEAMCLAMP products are approved for use by Lloyds Register Type and DIBt.





**KEE SAFETY SINGAPORE PTE LTD**  
38 Ang Mo Kio Industrial Park 2  
#01-03, Singapore 569511

Tel.: +65 6385 4166  
Email: [sgsales@keesafety.com](mailto:sgsales@keesafety.com)  
Web: [www.keesafety.sg](http://www.keesafety.sg)



SEPARATING PEOPLE FROM HAZARDS