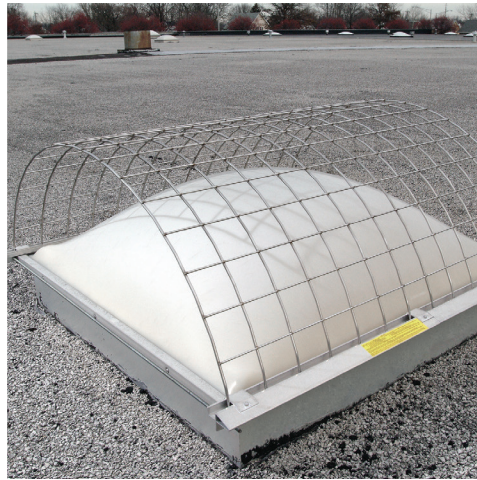




SEPARATING PEOPLE FROM HAZARDS

Rooftop Safety Audit



- WORK WITH OUR FALL PREVENTION EXPERTS TO PERFORM A ROOFTOP SAFETY AUDIT
- RECOGNIZE HAZARDS THAT EXIST ON THE ROOF
- LEARN ABOUT KEE SAFETY SYSTEMS THAT PREVENT THE RISK OF FALL
- IMPROVE WORKER SAFETY WITH SOLUTIONS THAT EXCEED OSHA COMPLIANCE



How do We Assess Risk on the Rooftop?

Kee Safety Fall Protection Experts perform a critical analysis of the entire rooftop surface to identify the hazards where workers are exposed to the greatest risk. This ensures that the most dangerous areas are protected immediately with state-of-the-art fall protection systems and OSHA compliant solutions.

We assess risk based on two factors:

1. Severity of Injury: In fall protection assessment, the severity of a fall-related injury is always assumed to be **life-threatening**

2. Likelihood: The greatest predictor for the likelihood of an accident occurring is to review the **frequency** of exposure to the hazard on the roof.

3. RISK = SEVERITY x LIKELIHOOD

We prioritize our Risk Assessment based on the **critical danger** and how **frequently** workers are exposed.

Outlined here is our basic approach. Your roof must be reviewed with one of our Kee Safety professionals as each site is unique and your specific roof may require variable solutions.

3

OSHA Code: 1910.28(b)(13)

Unprotected Edges

The edge of the roof is the most visible hazard, and typically the hazard most people want to protect first. Proximity to the roof edge is a significant factor in identifying the likelihood of an accident occurring. **OSHA regulations cite that any building where work is performed within 15' of an open roof edge, each worker must be protected from falling with a guardrail system or other approved safety system.** Frequently, a worker's purpose for accessing the roof is to service a piece of equipment. It is important to document if the equipment too close to an unprotected edge.

1

OSHA Code: 1910.28(b)(3)(iv)

Access Points

Access points are the **most frequented** hazard on any rooftop. Workers are exposed to this risk twice - every time they enter and exit the roof to perform tasks. If a worker is required to access the roof 8 times per year, they are exposed to the access point hazard 16 times. OSHA requires that all ladders and hatches be secured with a self-closing gate and safety-compliant railing.

2

OSHA Code: 1910.28(b)(3)(i)

Rooftop Openings

Openings are the most often overlooked hazard, so they are extremely critical to protect. OSHA considers skylights to be a hole in the rooftop which is why Kee Safety evaluates all rooftop openings as a serious risk concern.

Statistically, more people fall through skylights than over the open edge of a roof. As a worker is traversing the middle of the rooftop, they have a false sense of security. Operating far from the roof edge, carrying equipment, or focused on the job at hand, it is easy to misstep and fall through an unprotected skylight opening.

4

Obstacles

Understanding the path that workers take across the roof is necessary for a complete fall protection assessment. Obstacles on the roof force workers to unsafely climb over or step around the obstructions, often placing workers at risk by walking too close to the roof edge and slipping off.



Rooftop Fall Protection: An Integrated Solution

When access to the entire roof is required, the safest, most comprehensive solution is a perimeter railing system that surrounds and protects all roof edges.

Kee Walk®

On a standing seam metal roof, or metal profile roof, a level walkway system provides a safe, anti-slip and level surface to avoid tripping over the seams, crowns and valleys.

Kee Walk® with Guardrail

Kee Walk with integrated Guardrail provides sturdy handrail support securely attached to non-slip treads for dependable foot traction and balance where roof surfaces are uneven or slippery.

KeeGuard® Skylight Screens

Skylights are considered a hole in the roof - an OSHA safety hazard. The unique construction and mounting design allow the KeeGuard Skylight Screen to be attached without penetration, maintaining the integrity of the roof and the skylight.

KeeGuard® Topfix

Dependable railing for all metal roof types provides non-penetrating safety at the highest level.

Kee Hatch®

A safety access and railing system designed for secure egress/ingress through a dedicated roof hatch. Railing protection supports safety when the hatch is open. Self-closing gate protects workers when entering and exiting the rooftop.

Kee Gate®

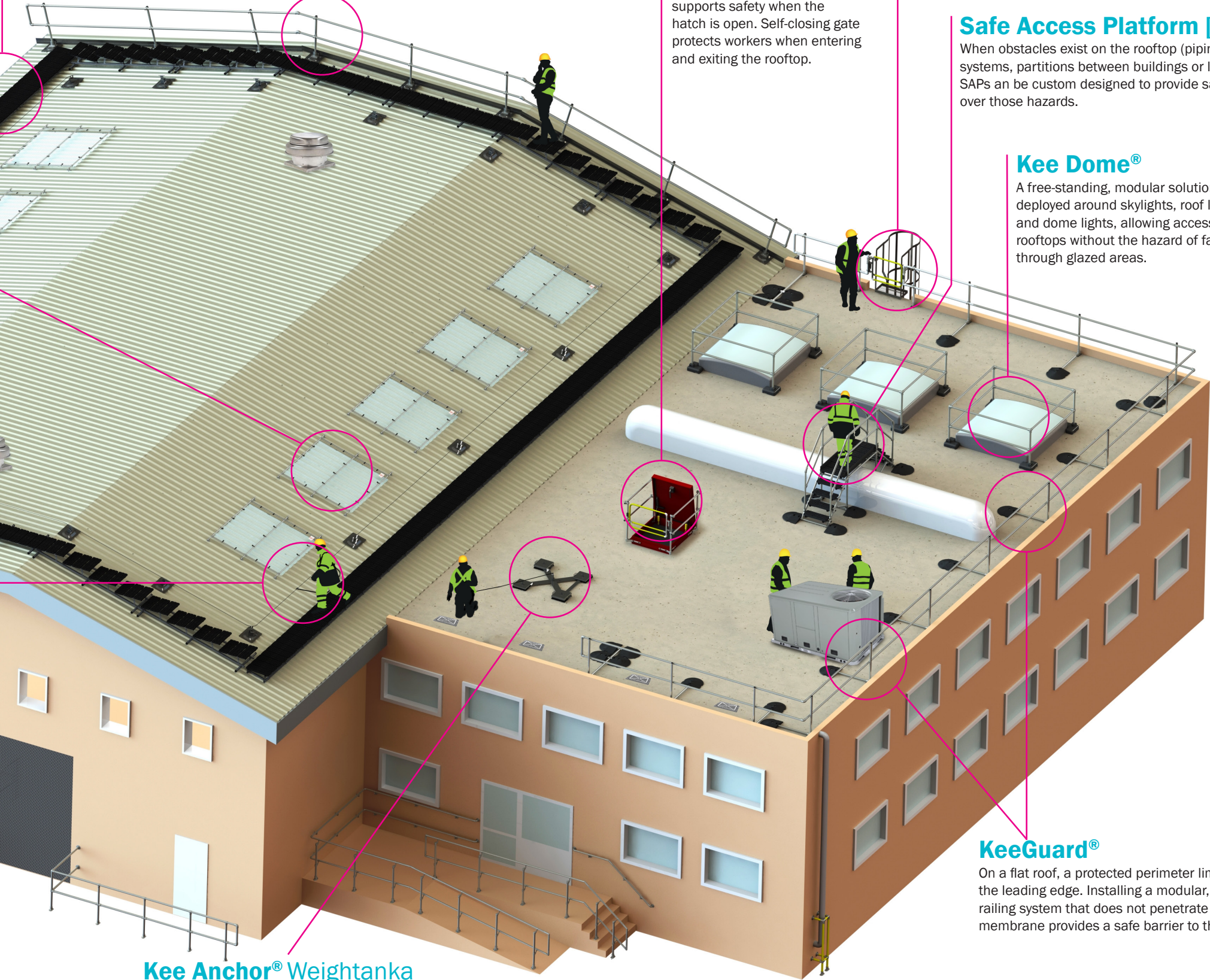
Provides permanent protection for any openings, ladder/stair access points, roof hatches and restricted areas, where access for roof maintenance is required.

Safe Access Platform [SAP]

When obstacles exist on the rooftop (piping, ventilation systems, partitions between buildings or level changes) SAPs can be custom designed to provide safe access over those hazards.

Kee Dome®

A free-standing, modular solution deployed around skylights, roof lights and dome lights, allowing access to rooftops without the hazard of falling through glazed areas.



KeeLine®

Horizontal safety lines provide continuous protection when working at heights. Our 39-foot system accommodates up to 3 users and can be mounted either directly onto the roof surface or on to the building structure.

Kee Anchor® Weightanka

A modular, dead-weight anchor fall prevention system, used with personal fall protection equipment, allows for safe freedom of movement around the roof space.

KeeGuard®

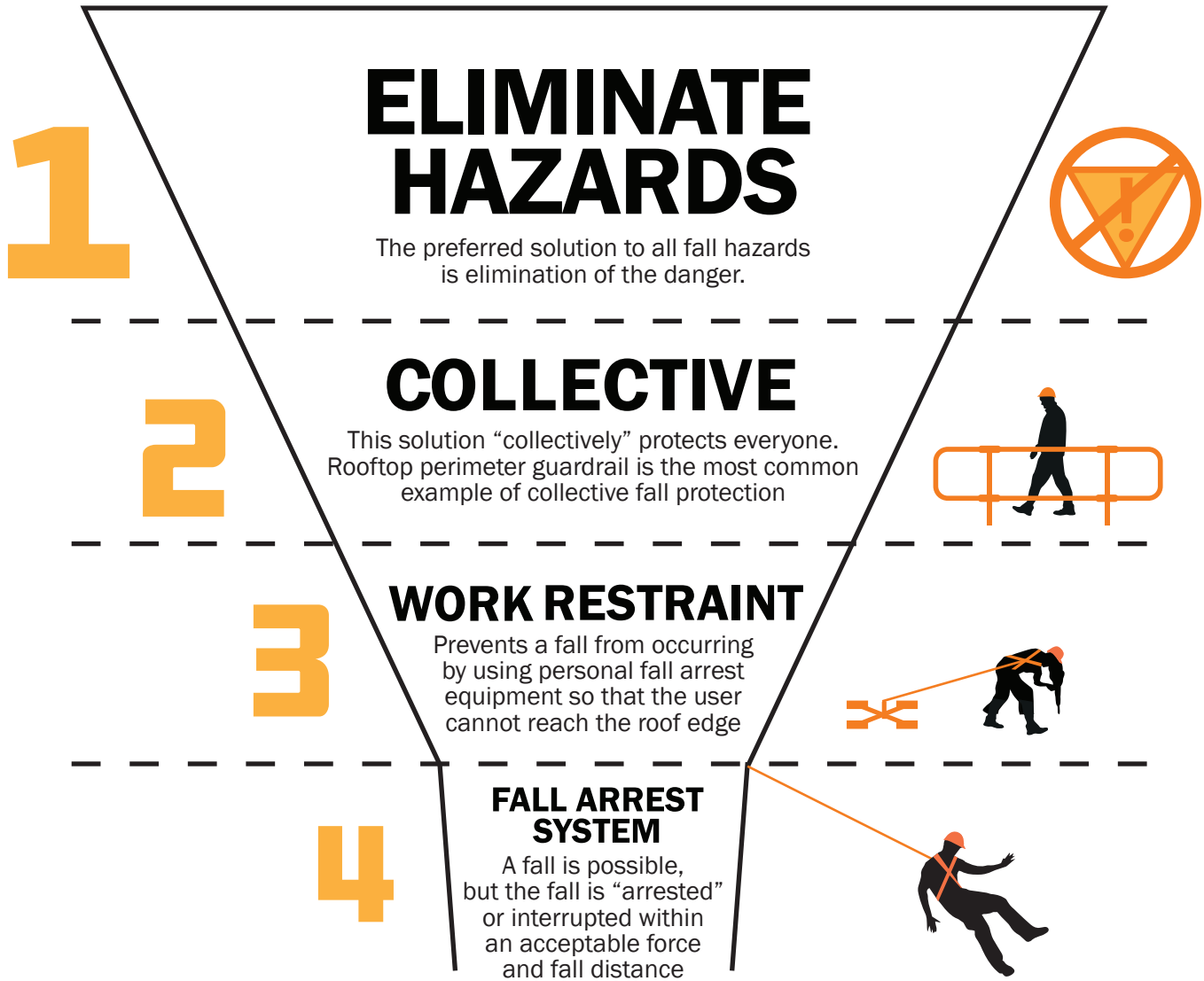
On a flat roof, a protected perimeter limits access to the leading edge. Installing a modular, free-standing railing system that does not penetrate the roof membrane provides a safe barrier to the roof edge.



Hierarchy of Fall Protection

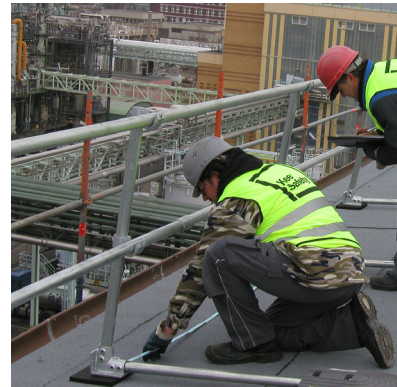
Depend on the Experts at Kee Safety

A truly comprehensive rooftop solution follows the Hierarchy of Fall Protection, the gold-standard of safety procedures. Our experts start by inspecting the roof site for potential fall hazards. From there, a complete system solution and recommendations that descend down the four levels of the hierarchy—from simple, sensible approaches for eliminating risks - all the way down to lifesaving personal protection systems.



Kee Safety uses the Hierarchy of Fall Protection to reduce risk on the roof. Originated by OSHA, the goal is to expertly evaluate, provide a comprehensive strategy, and install a rooftop solution to successfully and safely separate people from hazards.

Collective Systems require no additional training to use. Work Restraint and Fall Arrest Systems both require a high level of user competency, training and additional inspection to be used effectively.



OSHA Industry Standards

OSHA standards have been updated to reflect industry fall protection requirements. Fall Protection OSHA standards are central to the use of this Rooftop Safety Audit.



Discussions on roof safety can be overwhelming regarding OSHA regulations, inspections, and regional standards. Kee Safety can assist you with a full understanding of the OSHA codes that are applicable to your specific rooftop safety concerns.

- 1 Access Points: 1910.28(b)(3)(iv)**
Each employee is protected from falling into a ladder way, floor hole, or ladder way platform hole by a guardrail system and toe boards erected on all exposed sides, except at the entrance to the hole, where a self-closing gate or an offset must be used*

**Chains are no longer permitted for use as a fall protection system on rooftop access points.*

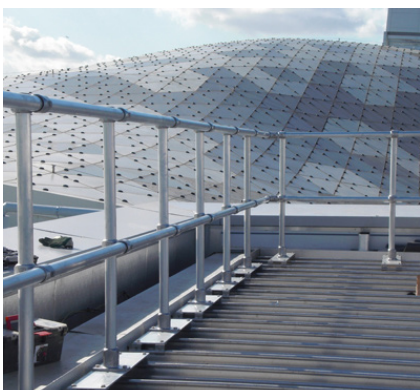
- 2 Rooftop Openings: 1910.28(b)(3)(i)**
Each employee is protected from falling through any hole (including skylights) that is 4 feet (1.2 m) or more above a lower level by one or more of the following:
- Covers
 - Guardrail Systems
 - Travel Restraint Systems
 - Personal Fall Arrest System

- 3 Unprotected Edges: 1910.28(b)(13)**
When work is performed less than 6 feet (1.6 m) from the roof edge, the employer must ensure each employee is protected from falling by a guardrail system, safety net system, travel restraint system, or personal fall arrest system.

When work is performed at least 6 feet (1.6 m) but less than 15 feet (4.6 m) from the roof edge, the employer must ensure each employee is protected from falling by using a guardrail system, safety net system, travel restraint system, or personal fall arrest system. The employer may use a designated area when performing work that is both infrequent and temporary.

When work is performed 15 feet (4.6 m) or more from the roof edge, the employer must: protect each employee from falling by a guardrail system, safety net system, travel restraint system, or personal fall arrest system or a designated area.

The employer is not required to provide any fall protection, provided the work is both infrequent and temporary; and implement and enforce a work rule prohibiting employees from going within 15 feet (4.6 m) of the roof edge without using fall protection in accordance with paragraphs (b)(13)(i) and (ii) of this section.



Benefits of a Rooftop Safety Audit with Kee Safety

- We provide you with a detailed action plan, prioritizing the areas deemed as “critical”
- Our experts create a customized solution that fits the exact needs of your facility
- Kee Safety fully documents your fall protection requirements for presentation to your peers, upper management, or budget approval board
 - Organizes your budget requests
 - Presents a coordinated plan to inspectors
- Only Kee Safety offers a solution-designed proposal using products that:
 - Will not puncture your roof, cause roof leaks, or void your roof warranty
 - Are third-party tested to meet OSHA and ANSI Standards
 - Are extremely long-lasting (20-30 year life expectancy)
 - Can be easily installed by your crew or local contractor



Installation

You can rely on Kee Safety and our worldwide network of certified installers to ensure compliance with all major standards and regulatory requirements. Our dedicated technical service team can provide a turn-key solution including on-site analysis, professional installation, advise on project costs and manage deadlines.

Kee Safety: Your Fall Protection Experts



Kee Safety is the leading expert and global manufacturer of safety components and fall protection systems. We are fully committed to Separating People from Hazards.

Established in 1934, Kee Safety has a proud history of engineering, manufacturing, and supplying the most trusted fall protection solutions, safety railing systems, and safe access equipment for working at height.

Please contact one of our qualified Fall Protection Experts to schedule a rooftop safety assessment today!



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