



SEPARATING PEOPLE FROM HAZARDS

What to Protect on Your Rooftop Now

WINTER-READY ROOFTOP FALL PROTECTION



OCTOBER 2020

Rooftop Fall Protection for Every Season

Separating People from Hazards

The rhythm of the changing seasons is a constant cycle. Predictably, winter will arrive and even as facility managers and safety professionals plan well in advance for the oncoming weather, maintenance will be required on their frosty rooftops. An emergency roof repair, a sudden skylight leak or simply general maintenance on rooftop equipment, there will be times in winter when an employee must access the roof.

Working on a snow-covered roof poses significant challenges, including exposure to the elements and the danger of falling. Now is the time to ensure that your company has proper fall protection in place to minimize the risks of working on wintry roofs and to separate workers from hazards. Identifying the risks on your roof and their potential liability is the first step.



What's on Top: The Top 4 Hazards on the Industrial Roof

Keeping Workers Safe is the Priority of Every Building Owner and Safety Manager

Access Points

Understanding how your workers access the roof is the single most important consideration. 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 work on the roof 8 times per year, they are exposed to the fall hazard 16 times – in each ingress on and every egress off the roof.

OSHA requires that all ladders and hatches be secured with a self-closing gate and safety-compliant railing to reduce the risk of fall when performing maintenance work. If your rooftop currently uses a chain across the access point, recent changes in OSHA code has determined that chains are no longer a viable safety measure for ladder ways or hatches. The Kee Hatch and Kee Gate systems are engineered with Kee Klamp galvanized steel component railing to separate workers from the danger of falls at access points.

The Rooftop Safety Audit: 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.



Rooftop Openings

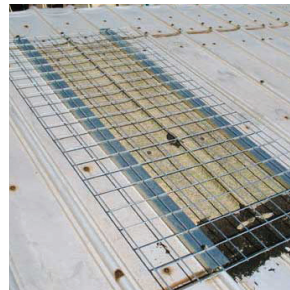
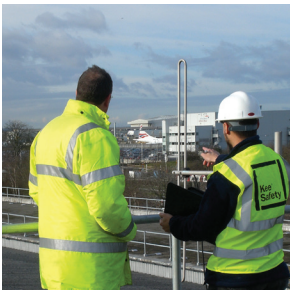
One of the most popular rooftop features - and the one that is the most dangerous for rooftop workers - are skylights. OSHA considers skylights to be a hole in the roof and has enacted specific laws to protect workers from the hazard of falling through these openings. Falling through a skylight will expose a person to lacerations and further injury as well as create a risk for anyone who may be inside and below the opening.

Before the winter weather arrives, mark all skylights with a prominent flag or marker so that workers will be able to distinguish and avoid skylights when they are covered with snow. This is also a good time to mark roof drains, vents, and the safest routes across your roof to eliminate guesswork when servicing equipment in the wintertime.

Installing skylight screens will protect workers from falling through the glazed areas when traversing the snow-covered roof. For metal roofs such as standing seam or corrugated/rib style, the unique construction and mounting design of Kee Skylight Screens allow the screen to be attached by clamping to the standing seam without penetration of the roof or the skylight.

Non-penetrating Curb Style Kee Skylight Screens attach to the outer frame of the skylight with engineered clips. This does not compromise the skylight or the roof and eliminates concern for leaks. Kee Skylight Screens are available in corrosion-resistant galvanized or stainless steel to withstand rain, snow, ice, and wind.

For larger domed skylights, we recommend Kee Dome, a free-standing fall protection solution for use around roof lights dome lights and skylights. Constructed of weather-hardy galvanized steel, Kee Dome stands firmly around the perimeter of the skylight opening and does not block sunlight. The system is fully modular, so it can be easily dismantled, moved, and re-erected as required.

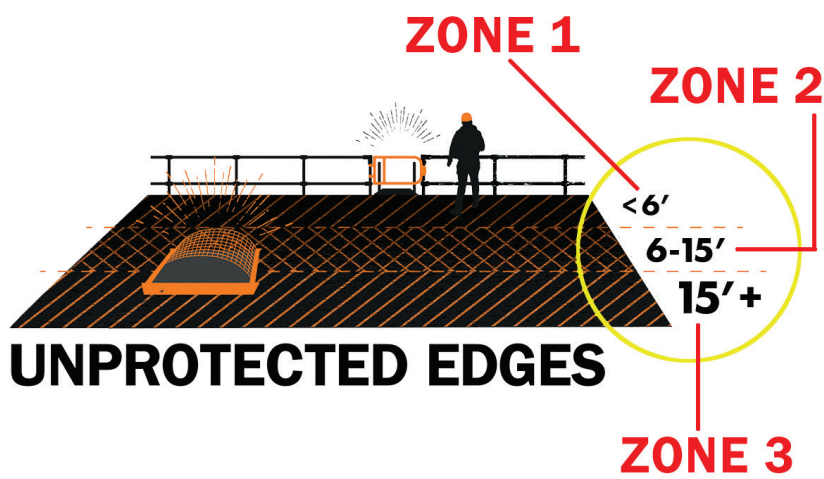


Unprotected Roof Edges

The edge of the roof is the most visible hazard, and typically the hazard most people want to protect first. Protecting workers from slips, trips, and falls from the roof edge is critical in every season, and most important in the winter months when cold temperatures and wind make for icy conditions under foot.

Frequently, a worker's purpose for accessing the roof is to service a piece of equipment. Proximity to the roof edge is a significant factor in identifying the likelihood of an accident occurring. Remember that employees will be working under extreme weather conditions and it is important to document where machinery, HVAC systems, ductwork or drains are located and if they are too close to an unprotected edge.

OSHA regulations cite that for any building where work is performed within 15 feet of an open roof edge, each worker must be protected from falling by a guardrail system or other approved safety system. Kee Safety recognizes OSHA's three work zones and provide protective guardrail options for each area of the roof.



Get in the Zone

1

Zone 1:

When work is performed less than 6 feet from the roof edge, employees must be protected from falling by a guardrail system, a travel restraint system, or personal fall arrest system.

2

Zone 2:

Working 6 to 15 feet from the roof edge, employees must be protected with the same systems mentioned above; however, a designated area may be implemented when rooftop work is both infrequent and temporary.

3

Zone 3:

Working 15 feet or more from the roof edge has the same criteria as above; however, implementation, training, and enforcement of a work rule that prohibits access within 15 feet of the roof edge without using fall protection is acceptable. This applies only if the work is both temporary and infrequent.

OSHA's Definition of Infrequent and Temporary:

Infrequent means that the work is performed occasionally. Infrequent work is usually performed once a year, once a month, or as needed. Daily, regular, or routine tasks are not infrequent.

Temporary means that the work is brief or short. Temporary tasks usually take less than two hours to complete and are not complicated.

Unprotected Roof Edges

On a flat roof, a protected perimeter limits access to the dangerous edge. Installing a modular, free-standing railing system that does not penetrate the roof membrane provides an OSHA compliant barrier. KeeGuard® component guardrail offers multiple configurations for every roof and versatility on uniquely shaped roofs. The cantilevered bases, made from 100% recycled PVC, provide unrivaled strength and protection.

For optimal stability on metal profile or standing seam metal roof up to 45 degrees, KeeGuard® Topfix is attached to the cladding panel via a special base plate engineered specifically for metal roofs. It also provides non-penetrating safety at the highest level.

KeeGuard® Contractor is versatile and easy to assemble, providing an innovative approach as a portable or temporary railing system. Suitable for roofs of up to 10-degree pitch, the guardrail components are galvanized for extreme durability and base weights constructed from recycled PVC for long life.

When it comes to maintenance work on the roof in the winter, do not take risks. Kee Safety offers free Rooftop Safety Audits, both on-site or virtual assessments, so you can protect your rooftop now before the temperature drops and the wintry weather arrives. A proactive approach will eliminate the increased danger of slips and falls due to wet, windy, and icy conditions on unprotected rooftops.



KeeGuard® Topfix



KeeGuard® Contractor



Be Compliant: OSHA Codes for Industrial Rooftops

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.



Contact one of our qualified Fall Protection Experts and schedule a rooftop safety assessment today!



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