

HOW TO REMAIN PROTECTED FROM FALLS DURING LEADING EDGE WORK



Honeywell

BETWEEN 1933-1935, 30 WORKERS FELL WHILE BUILDING THE GOLDEN GATE BRIDGE.

Construction companies had a grim rule of thumb: one worker fatality for every million dollars spent. Fortunately, 19 of them were saved by a safety net placed underneath and construction did not stop to a halt.

Today, despite innovations in construction techniques, construction work on high-rise buildings is still one of the trickiest, most complex and risky jobs for construction workers.

Inherent dangers in working at height include the many hazards of a leading edge, defined as the unprotected side or edge of a floor, roof, or formwork for a floor or other walking/working surface (such as deck) during periods when it is actively or continuously under construction. (ANSI and OSHA)

DO YOU KNOW WHERE YOUR EDGES ARE?

Workers who work within less than 6 feet from an unprotected edge risk falling and there is a high risk for their lifelines to be cut, severed, or compromised by sharp edges.

In work sites of every variety, particularly in construction, edges are much more common than people realize. Whether a worker is laying roofing, traversing a beam, or simply working near the unprotected sides of an upper floor, falls over an edge may be more hazardous than other falls. Without protection designed for edges, traditional lifelines risk being severed and the force upon the worker in the event of a fall is significantly increased. Honeywell estimates that as many as 80% of fall-protection users have applications in which a lifeline will come in contact with an edge in the event of a fall.

COLLECTIVE AND PERSONAL EDGE PROTECTION

Installing metal decking during construction of steel-frame buildings is one of the most dangerous construction jobs. As ironworkers spread sheets over narrow structural beams to form the building floor, they risk falling off the unsecured sides of the work zone.

The first protective measures recommended are collective protective equipment - guardrails, working platforms, barriers and safety nets. But even installing this equipment can be a hazardous job.

Many construction sites allow timber boards for edge protection. This is a common, but ineffective practice. They are difficult to secure and handle when installed. Furthermore, if workers fail to install toe boards, tools and debris risk falling off when wind speed intensifies.

Extreme weather and high winds expose workers not only to falls but also to falling objects. That's why the European Standard of Temporary Edge Protection, EN 13374, certifies that an edge protection system has been fully tested to withstand high wind loads and can contain debris and objects.

It applies to edge protection systems for flat and inclined surfaces and specifies the requirements for three classes of temporary edge protection. These are known as Class A, Class B, and Class C.



THE THREE CLASSES OF TEMPORARY EDGE PROTECTION:

- Class A – protection to flat surfaces and slopes generally up to 10 degrees.
- Class B – protection to flat surfaces and slopes up to 30 degrees.
- Class C – protection to steeply sloping surfaces up to 60 degrees.

Accidents caused by a falling object are the second leading cause of fatalities in construction.

This hazard affects workers, as well as the public. Pedestrians and traffic moving close to the giant concrete towers, add an extra dimension to the level of risk.

WHY STANDARD LANYARDS ARE NOT ENOUGH

Foot-level tie-off generates forces that exceed typical safety parameters. When workers are attached at foot level, they fall farther than in cases where they are anchored at shoulder height or directly overhead. In his scenario, the need for additional fall clearance is a must.

Not all PFLs or SRLs are designed for low anchor points. With conventional horizontal lifelines, the worker's lanyard is attached below shoulder level, allowing the worker to hit the deck below in case of a fall.

WHEN SHOULD A LEADING EDGE SRL BE USED?

- Anytime the SRL is connected at foot level.
- Anytime the lifeline could meet an edge.
- Anytime it is anchored below the dorsal D-ring on the harness.

Whenever workers are at risk of falling over an edge, but do not have the option to use a higher anchor point, it is crucial to use SRLs - such as the Honeywell Miller TurboLite™ Edge SRL - that are fully edge-tested and approved to be attached at ground level.

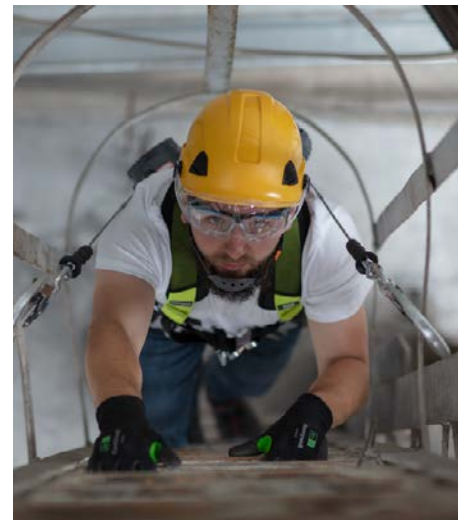
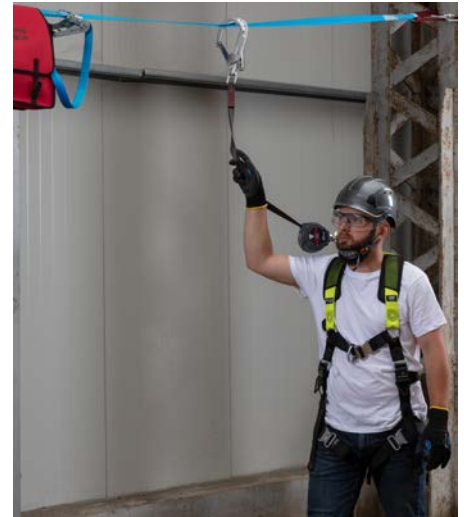
In the case of leading edges, the SRL must meet specific conditions for dynamic performance, dynamic strength and static strength, as defined in ANSI Z359.14-2014 and CSA Z259.2.2-17 SRL. [Watch the edge test video](#)

A shock absorber is integrated into the lifeline to lower the fall arrest force. During normal work, this fall limiter lets the self-retracting lifeline/lanyard extend and retract under slight tension. If you should slip or trip, the quick-activating braking system stops your free fall, providing for a safe and quick rescue.

Miller TurboLite™ Edge is certified for workers weighing up to 140kg due to the use of highly durable reinforced webbing. It has a quick locking mechanism for reduced fall arrest distance, especially important when little vertical clearance is available.

SITE PLANNING

Leading edge fall protection is only one element of an effective fall prevention program. This must include pre-planning, including job hazard analysis, a construction process plan, [task-specific PPE](#) and [training on the selection, use and maintenance of fall protection PPE](#).



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