Leading Edge **Hazards**

And what to do about them

MSA
The Safety Company

WE KNOW WHAT'S AT STAKE.

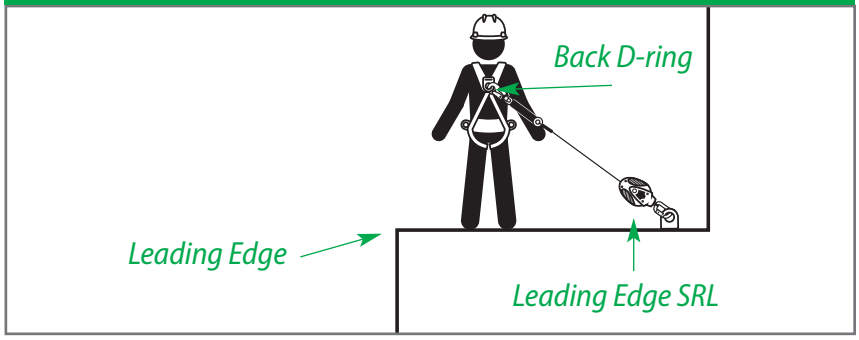
What is Leading Edge?

Leading edge is an application where in a fall event, the lifeline of the self-retracting lanyard may come in contact with an exposed edge, or edge of the working surface. In many scenarios, leading edge applications occur when the harness wearer is tied off or anchored below their back D-ring, however it is possible when anchor points are overhead as well.

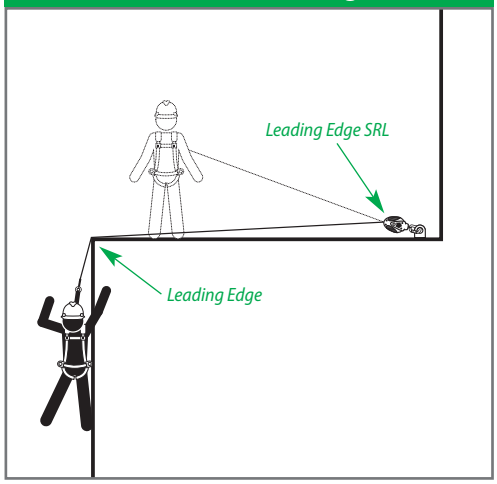
Some examples of leading edge applications include:

- Concrete decking
- Glass installation
- Pre-cast bridge assembly
- Roof decking
- Steel erection

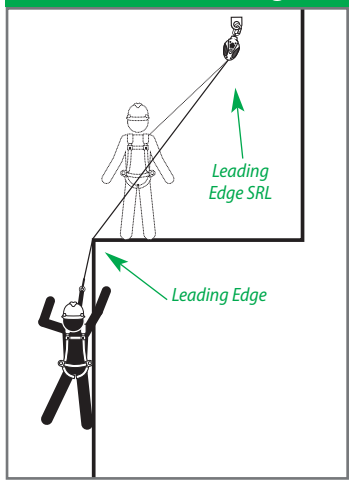
Leading Edge Application



Foot-level Anchorage



Overhead Anchorage



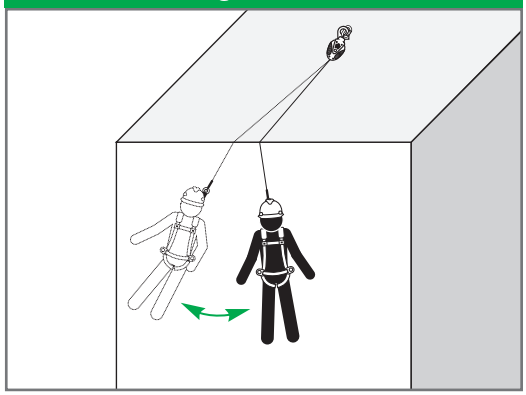
The Unique Safety Challenge of Leading Edge

In leading edge applications, the potential for a fall is complicated by the edge. And that means greater risk for the lifeline to be frayed, cut, or severed in the event of a fall.

Swing fall is another hazard associated with leading edge applications. Swing fall is a pendulum-like motion that occurs during and/or after a vertical fall. A swing fall results when an authorized person begins a fall from a position that is located horizontally away from a fixed anchorage point. (See figure at right.) The friction of a lifeline against an edge when this occurs increases the risk of the lifeline being cut or severed.

Overhead, or traditional SRLs are not designed or rated to arrest a fall over an edge, and can pose a risk to the worker when they are used improperly. Therefore, these challenges present the need for SRLs that are better equipped to handle the risk that accompanies leading edge work.

Swing Fall Hazard



EN 360: 2002, sheet CNB/P/11.060

Currently, to be labeled SRL-LE for use in leading edge applications, the lifeline must meet specific EN 360: 2002, sheet CNB/P/11.060 standard requirements for dynamic performance, dynamic strength, and static strength. It must also meet these requirements:

- Leading edge dynamic performance tests must be carried out with the retractable lanyard perpendicular and laterally offset to the edge using at least a 100 kg rigid steel test mass falling through 1,5 m.
- Dynamic strength tests must be performed with the retractable lanyard perpendicular and laterally offset to the edge using at least a 100 kg rigid steel test mass falling through 2 m.
- Tests must be carried out on a drawn square steel bar in accordance with EN 10278:1999 (material C 45+C or E 335 GC (ST60) pursuant to EN 10025). The dimensions of the steel bar shall be at least 10 x ≤70 mm, the edge radius (0.5 +/-0.05) mm, the surface roughness in accordance with EN ISO 1302: average surface finish Ra = 3.2 µm.
- Test must be done in a horizontal manner and fall over a steel edge without burrs.

Currently a CNB/P/11.060 test criteria does not cover all of the various types of leading edge applications. Users should contact their Fall Protection equipment manufacturers for applications other than steel edges, as prescribed in the current standard.

So, how do you know if your SRL is designed and tested to the current leading edge standard? It will be marked as EN 360: 2002, CNB/P/11.060.

4 Rules for Keeping the Leading Edge Worker Safe

Like most PPE, it is important to first go through the hierarchy of controls prior to choosing a personal fall arrest system. Eliminating the hazard all together, passive fall protection and fall restraint systems should all be evaluated first, before choosing SRLs. Here are 4 additional tips for keeping the leading edge worker safe.

1. **Create an "off limits" zone.**
   If feasible, prohibit workers from walking along an edge. Getting too close to the edge and relying solely on fall protection PPE is a dangerous, if not deadly practice, so put a stop to it. Today.

2. **Guard and protect.**
   Put control measures like barriers in place to help prevent accidental contact with a sharp edge.

3. **Use the correct lifeline.**
   Not all fall protection equipment is created equal. There's a great deal of research, design, development, and testing involved in engineering EN-certified SRL-LE. Make sure yours is truly certified to the current EN 360: 2002, sheet CNB/P/11.060 standard.

4. **Train, train, train.**
   Make sure workers know how to use, care, and maintain their SRLs.

Conclusion

Because leading edge products can be used in both overhead and foot level tie-off, using these SRLs can make product selection simpler—especially when you are unsure if an exposed edge may be a concern at some point during the job.

Not sure if your SRLs are meant for Leading Edge? Contact MSA.

MSA
The Safety Company

MSA—**The Safety Company**

As a global leader in fall protection solutions, MSA has more than 20 years of experience protecting the worker at height. With focused dedication to safety, design, and consulting, MSA's safety solutions are used by workers around the world in a broad range of markets, including general industry, construction, and oil, gas, and petrochemical. Founded in 1914 and headquartered north of Pittsburgh in Cranberry Township, PA, MSA employs 4,300 people worldwide and has manufacturing operations in the United States, Europe, Asia, and Latin America.

Isn't it time to *rethink* your safety program?

Inadequate or incorrect protection can cost someone their life. Their risk, is your risk. Make sure there are no gaps in your leading edge fall protection program.

Request your free safety gap analysis now.

Visit us at www.msasafety.com.

Your direct contact

MSA Australia
11 Columbia Way
Baulkham Hills NSW 2153
Customer Service: 1300 728 672
Email: aus.customerservice@MSAsafety.com

MSA New Zealand

Customer Service: 0800 441 335
Email: nz.customerservice@MSAsafety.com

For contact details of your local MSA affiliate, please visit our website.

Subject to change without notice
ID 2300-208-MC-EU