



# ROOFTOP GUARDRAIL SYSTEMS

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# WHO WE ARE

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# LIFTSAFE FALL PROTECTION

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At Liftsafe Fall Protection, our focus is creating engineered solutions that ensure your employees are safe from falling accidents and falling objects. In order to do this effectively, we offer fall protection, netting, and ground support equipment systems that can be custom fit to your unique scenario.

**We design, we build, we inspect, and we maintain.**





# GUARDRAIL SYSTEMS

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# ROOFGUARD

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- Versatile, economic and modular fall protection system designed to protect employees/ contractors performing job functions at, or near, the leading edge of a rooftop
- Requires NO penetration of the roof membrane, therefore no leaks
- Counterweighted system utilizing cast steel base plates to provide enough weight on the “returns” to meet all requirements of lateral force loading
- “Passive” fall protection system
- Provides site-specific coverage (i.e. single HVAC unit) or provides full or partial perimeter coverage on a rooftop
- Consists of aluminum pipe, magnesium alloy fittings and cast steel base plates



# ROOFGUARD IN ACTION



## LEGEND

- 01 ROOFGUARD CLASSIC GUARDRAIL
- 02 HATCHGUARD
- 03 SKYLIGHT GUARDRAIL
- 04 ROOFSTEP CROSSOVER WALKWAY
- 05 FIXED ACCESS LADDER

**CUSTOM ROOFTOP SOLUTIONS  
DESIGNED BY OUR  
IN-HOUSE TEAM OF ENGINEERS**



**STAY SAFE**

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# SAFETY IN NUMBERS

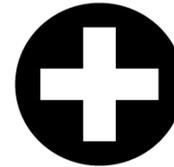
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“Falls are the **second leading cause** of accidental or unintentional injuries and deaths worldwide. Each year an estimated **646,000 individuals die from falls globally.**”  
- *World Health Organization (2018)*

## Is cutting corners on safety requirements worth the risk?

RoofGuard is an investment in protecting your workforce that ends up saving you time, money, and liability. Short of eliminating rooftop hazards altogether, RoofGuard is an engineering control that meets or exceeds all provincial safety requirements.

### 100% PREVENTABLE INJURIES



In Canada, an average of 42,000+ workers are injured each year from fall-related accidents. - *OHS Canada*

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### LOST COSTS



Over 42,000 workers get injured every year due to fall incidents. This number represents roughly 18% of the "time-loss" injuries across Canada. - *AWCBC*

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### DIRECT COSTS



According to WSIB, direct costs from fall-related workplace injuries averaged \$11,771 per injury. - *WSIB*

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### FATALITIES



The second leading cause of workplace fatalities was due to falls. Accounting for an average of 15.49% of total traumatic fatalities per year from 2009 to 2018. - *OHSA*

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# UNDERSTAND THE SAFETY REGULATIONS

OHSA

12.10

A worker shall be adequately protected by a guardrail system. Requirements for guardrails are found in the regulation for construction projects (s.26.1) . The regulation for industrial establishment (ss. 13 and 14) contains provisions for permanent guardrails. The regulation for construction projects provides that if it is not reasonably possible to install guardrails, a worker must be adequately protected by at least one of the following methods of fall protection:

- Safety net
- Travel Restraint system
- Fall Arrest System
- Fall Restricting System





# CREATE A SAFE WORK ENVIRONMENT

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Falls are one of the leading causes of job-related injuries and fatalities. On any given day, every worker – even one used to working at heights – is at risk of having a fall and needs the best protection possible.

## Common Causes of Falls Include:

- Losing balance
- Losing grip on a support
- Support moving or giving way (i.e. ladder)
- Tripping
- Carrying product and not seeing an obstruction

# WORKPLACE FALL HAZARDS



ELEVATED SURFACES



FLOOR OPENINGS



UNEVEN SURFACES



GROUND OBSTRUCTIONS



DANGEROUS MACHINERY



## AMP FINES

INCREASED MANDATE IN 2020

VERY SERIOUS VIOLATIONS **NOW CARRY A \$15,000 MAXIMUM FINE**

CORPORATIONS MAY BE FINED UP TO **\$500,000**

## ACCIDENT COSTS

$$\left[ \begin{array}{l} \text{INCIDENT COSTS + INVESTIGATION COSTS +} \\ \text{PROPERTY DAMAGE + REPLACEMENT COSTS +} \\ \text{PRODUCTIVITY COSTS} \end{array} \right] \div \text{NET PROFIT \% BEFORE TAXES}$$

$$= \text{GROSS SALES REQUIRED TO RECOVER ACCIDENT COST}$$


THIS CALCULATION DOES NOT INCLUDE THE COST OF ELEVATED WSIB PREMIUMS. MORE IMPORTANTLY, IT CANNOT QUANTIFY THE EMOTIONAL COST OF THE INJURED WORKER, THEIR FAMILIES, THEIR FRIENDS, AND COWORKERS



# WHAT ARE THE BENEFITS?

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# ROOFGUARD LINE OF PRODUCTS

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an investment in fall protection



Cost-effective  
working at heights  
safety solutions



Meets or exceeds all  
provincial and ANSI  
safety standards  
and regulations



Reduces PPE and  
training requirements  
of staff and contractors



Safe and reliable  
engineered fall  
protection solution



Simple and quick  
installations that  
require only one tool



Protects employees from  
injury or death from  
potential accidents  
working at heights



Reduces the potential  
for costly fines and  
high insurance premiums



All individual  
components are  
under 40 lbs

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**ON THE LEADING EDGE OF SAFETY**



# ADVANTAGES OF GUARDRAIL

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- More versatile than fixed-length steel rail systems
- Stackable base plates
- User friendly and ergonomic
- Lower labor costs
- Everything on one skid (materials, tools, layout design) – low shipping costs
- Price! More attractive pricing for distributor partners – higher selling margins
- Aluminum rail systems “blend in” with the building and mechanical equipment



# VERSATILITY OF ROOFTOP GUARDRAIL

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Our systems have been engineered with a modular, non-penetrating design that allows you to customize it to;

- fit any space and
- fit any configuration

A wide range of components allow the system to be configured to best suit your customer's rooftop requirements. Variable angle fittings will enable you to adjust the angle of coverage.

Special clamps and bolt-on components are available to connect the system directly to walls, existing railing systems, fixed access ladders and more.

# ACTIVE vs PASSIVE FALL PROTECTION

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- **Passive** fall protection is the type of protection that does NOT require any action by people. Examples include: Guardrails, Safety Nets, etc.
- **Active** fall protection is the type of protection that requires training and direct connection to an engineered fall protection system or anchor point. Examples include: Body Harnesses and Lanyards, Anchor Points, etc.
- **General rule:** Try and develop protection that does not require active fall protection. *“Engineer out the hazard”*
- Guardrails are a **preferred** method of protection on a rooftop
  - No special training required
  - Protect several people at the same time



# GUARDRAIL SYSTEM OPTIONS

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# WHAT'S INCLUDED

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**Base Plates**

Stackable Base Plates: Galvanized cast steel weights (40lb) with three optional holes for vertical post-placement. Includes handles to avoid pinch points. Masticated rubber pad included.



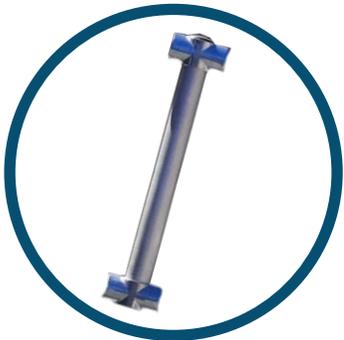
**Aluminum Pipe**

Pipe: Aluminum T6-6061, 1.5" SCH 1.9" O D.



**Fittings**

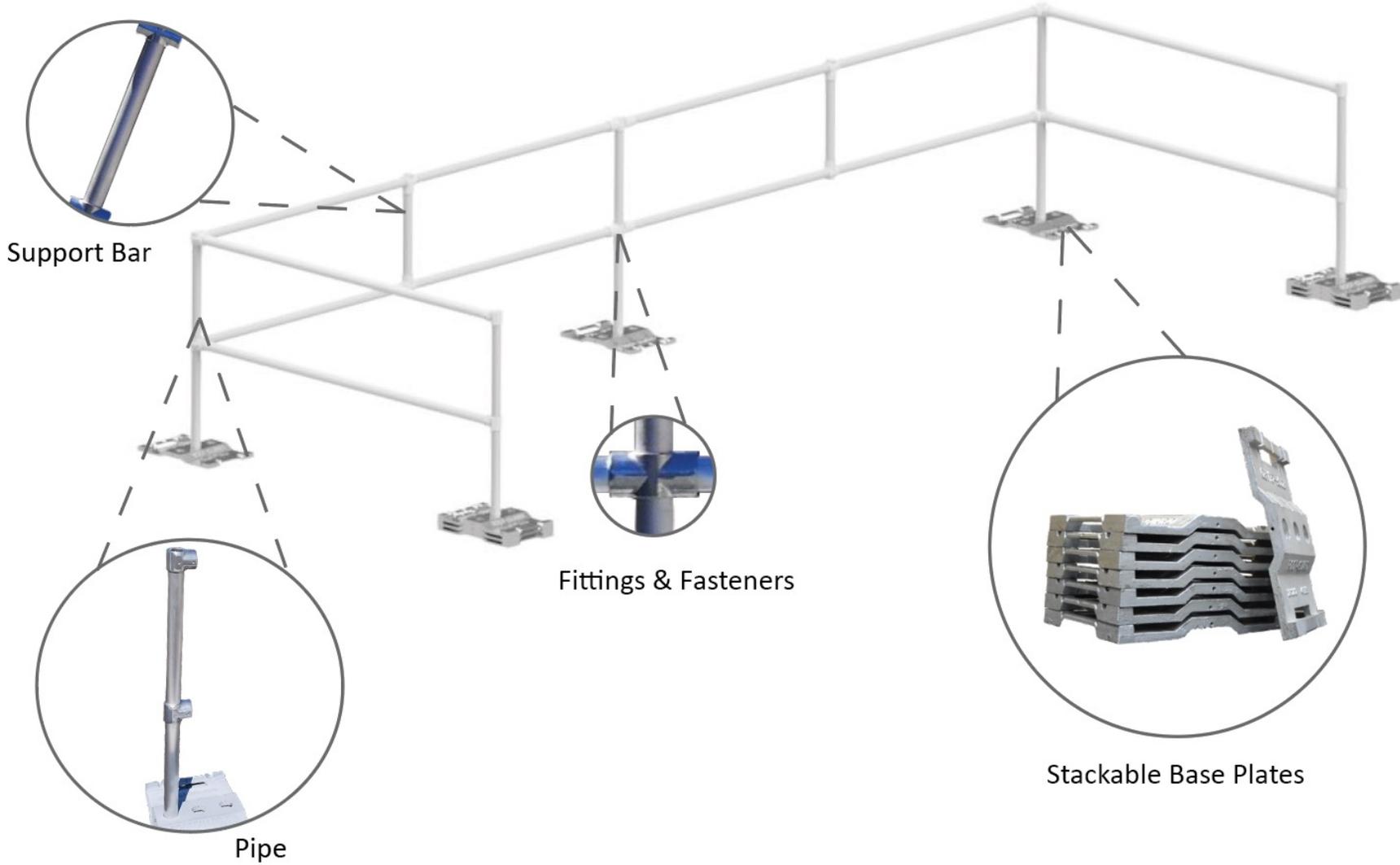
Fittings: Aluminum Magnesium Alloy, 535.  
Fasteners: stainless steel.



**Support Bar**

Aluminum 18" bar placed in the middle of rails greater than 6ft.





# TYPICAL LAYOUT

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Arguably the easiest rooftop system on the market to install, all kits come with everything required to assemble this elegantly simple system.

- Typically consists of 9 ft rail sections and 6 ft returns (tie-backs)
- Returns have a minimum of 3 base plates on the end post to provide the necessary counterweight to allow the system to meet lateral force ratings
- Returns are positioned at a MAXIMUM of 27 ft intervals (3 sections of 9 ft rails)
- If the return encounters a location whereby a 6 ft return will interfere with something on the roof: Rule of thumb – Add one additional base plate for each foot that is shortened on the return





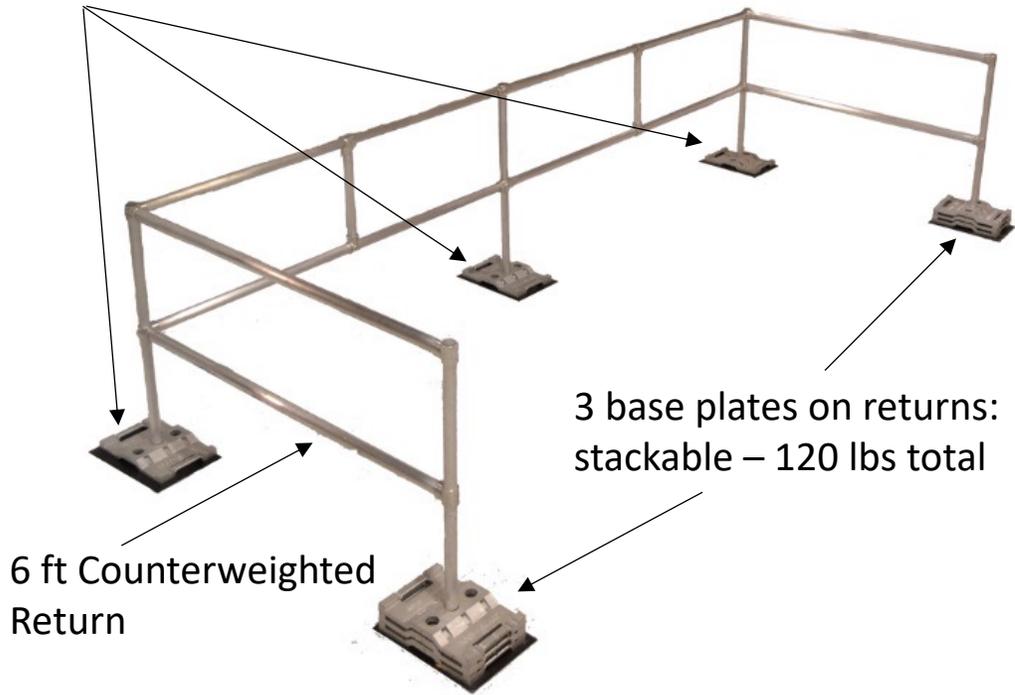
# LEADING EDGE FALL PROTECTION

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# ROOFGUARD CLASSIC

Single base plate on leading edge



RoofGuard classic is available in pre-packaged kits (9', 18' and 27') to simplify the ordering process and provide a product that can easily protect workers in most situations where work needs to be performed in or around one or two rooftop units.





# 9' ROOFGUARD CLASSIC

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9 ft. of leading-edge fall protection. It requires no rooftop penetration and can be categorized as a passive fall protection solution.

This particular system is ideal for providing reliable fall protection around HVAC units, vents, near access ladders, antennas, valves, solar panels, or near frequently travelled areas that require routine maintenance.



# 18' ROOFGUARD CLASSIC

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Our most popular design offers 18 ft. of leading-edge fall protection, with two 6 ft. sections for weighted ballast.

The hinged, variable fitting in the centre of the 18 ft. section allows for complete versatility when installing the system. It can be straight, at 90 degrees, or anything in between, depending on your requirements.

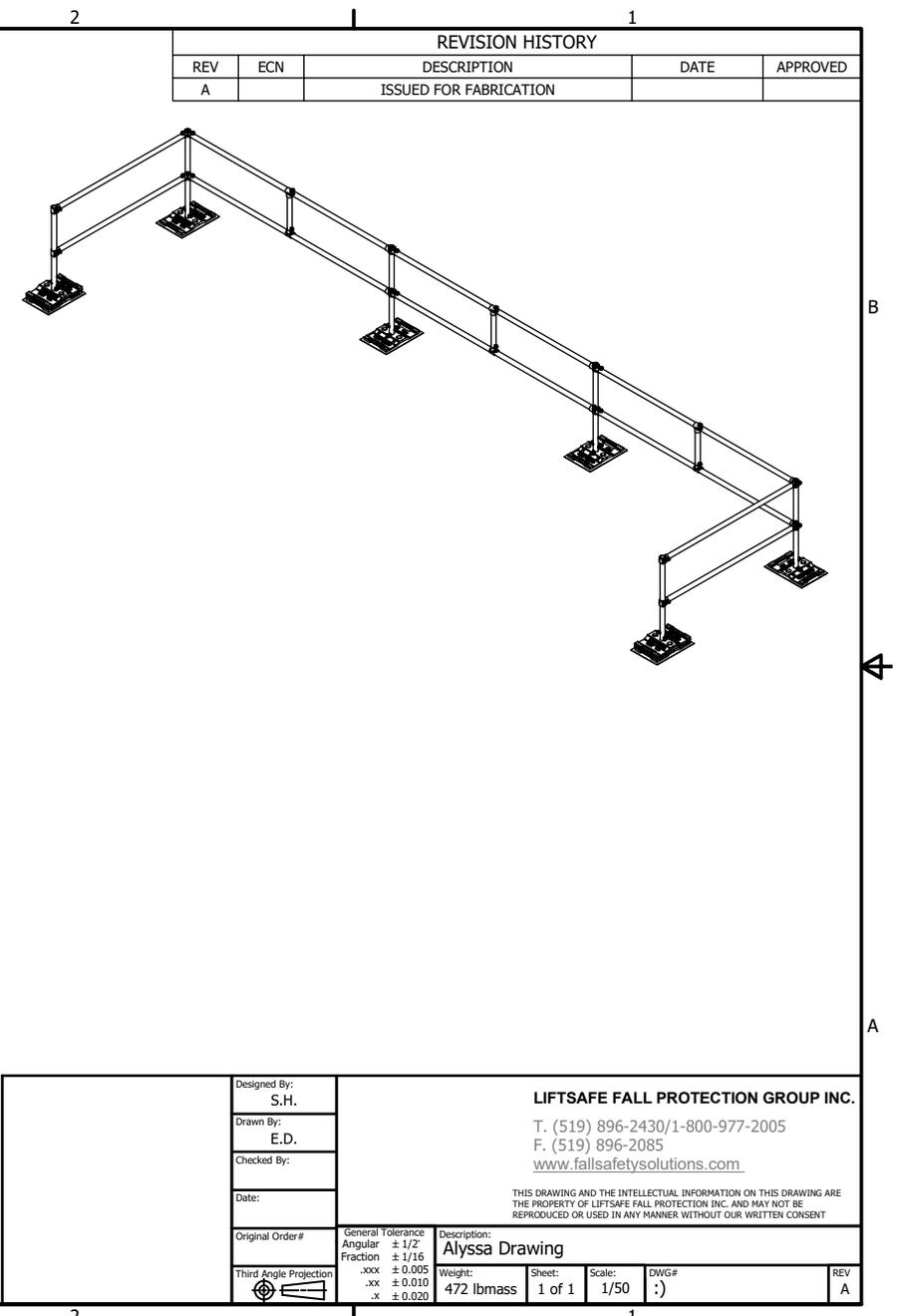


# 27' ROOFGUARD CLASSIC

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27 ft. of leading-edge fall protection with two 6 ft. sections for weighted ballast.

Two hinged fittings allow for complete versatility when installing the system. It can be straight, at 90 degrees, or anything in between, depending on your requirements.



# LAYOUT DRAWINGS

Each system comes with a layout drawing.

**The image shown here is a standard 27 ft Guardrail Kit.**

Layout drawings show each component's position, the number of base plates for each post position, etc.

Will help to assemble the system correctly.



# HATCHGUARD

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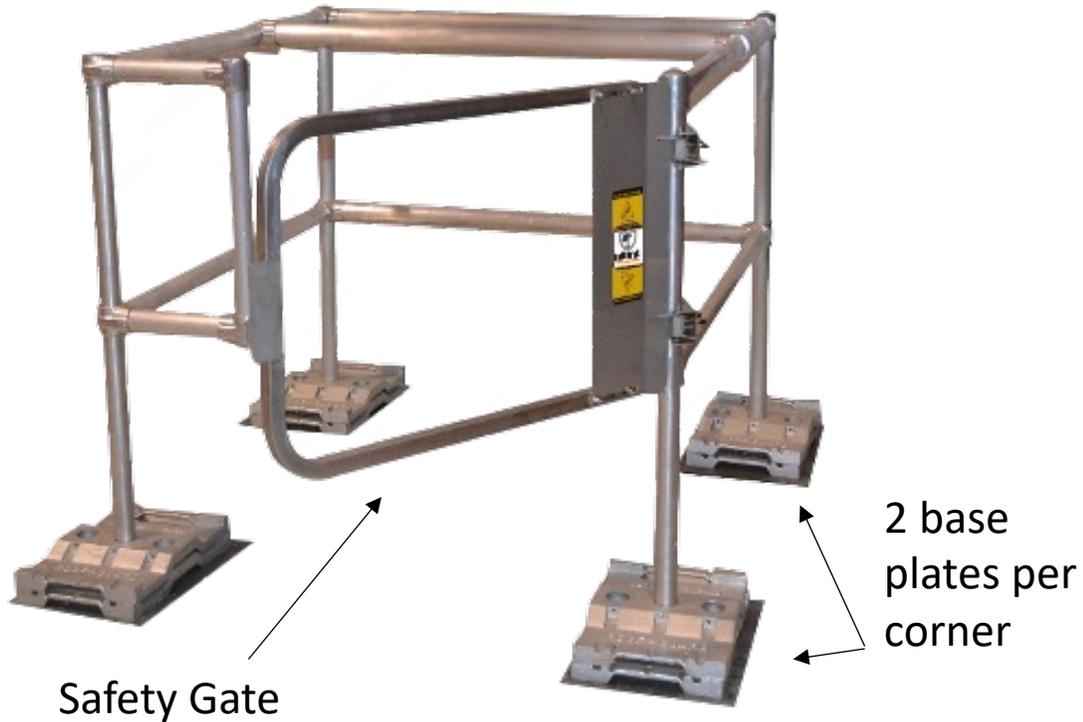
# HATCHGUARD

A permanent freestanding guardrail system, which is non-penetrating, and safely protects workers from falls through open roof hatches.

The systems simplicity allows for it to be integrated with virtually any rooftop opening.

Our HatchGuard system comes standard with a spring-loaded gate, ensuring the gate always returns to the safe, closed position.

An optional fixed grab bar when exiting or entering the rooftop can be included as requested. Custom sizes are available for non-standard hatches or rooftop openings.





# SKYLIGHT GUARDRAIL SYSTEMS

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# SKYLIGHT GUARDRAIL

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Designed specifically to address fall protection concerns without minimizing light from your skylights, this rooftop guardrail system allows for the optimum use of your skylight while ensuring that it does not become a fall protection liability.

Our skylight guardrail systems are freestanding and utilize our counterweighted base plates, eliminating the need for hardware connections to your rooftop.

- Custom sizes are available for non-standard skylights
- Meets or exceeds all safety regulations
- Requires no rooftop penetration
- Available in both kit and custom configurations
- Galvanized finish is corrosion resistant





# AVOID ROOFTOP OBSTRUCTIONS

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# ROOFSTEP SYSTEMS

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A counterweighted, freestanding fall protection system which provides safe and reliable access up and over elevation changes (including parapet walls).

These systems utilize our base plate design to ensure optimum weight is allotted at engineered approved points.

Twelve distinct kits have been designed, which include:

- Engineered ladders on the face and back of the parapet wall
- Platform over the parapet area to protect sensitive roof membrane from damage
- Fall protection guardrails with kits where falls from one elevation to another may occur



# ROOFSTEP

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## CROSSOVER

RoofStep Crossover (XS) help workers move up and over obstructions to similar roof levels and have 45-degree bracing on both sides for stability.



# ROOFSTEP

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## LADDER

RoofStep Ladder Series (LD) helps workers move from one level to another, and have guardrails on the upper side to help prevent a fall to the lower level.





# ROOFWALK

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The RoofWalk series is designed to create a sure-footed walkway on your rooftop. This fully customizable platform utilizes non-slip materials and is installed above the roof membrane ensuring no damage is being done while in use.

Utilizing our counterweighted base plates and rails, this system can be tailored to any flat roof application, providing safer access to any workspace by eliminating slipping and fall hazards.



# EQUIPMENT MAINTENANCE AND ACCESS

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# ROOFGUARD PLATFORMS

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Equipment maintenance may require elevated access that can put employees at risk. The use of railed platforms surrounding the equipment will eliminate this risk while improving work performance.

- Custom systems for all applications
- Easy and safe access and maintenance
- Blend in with existing roof aesthetics

Designed to meet or exceed the applicable required safety regulations. Personnel safety, accessibility, modular construction, maintenance, and ease of set-up for re-configuration are often key factors included within the design of these platforms.





# HOW TO QUOTE ROOFGUARD

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# THE QUOTING PROCESS

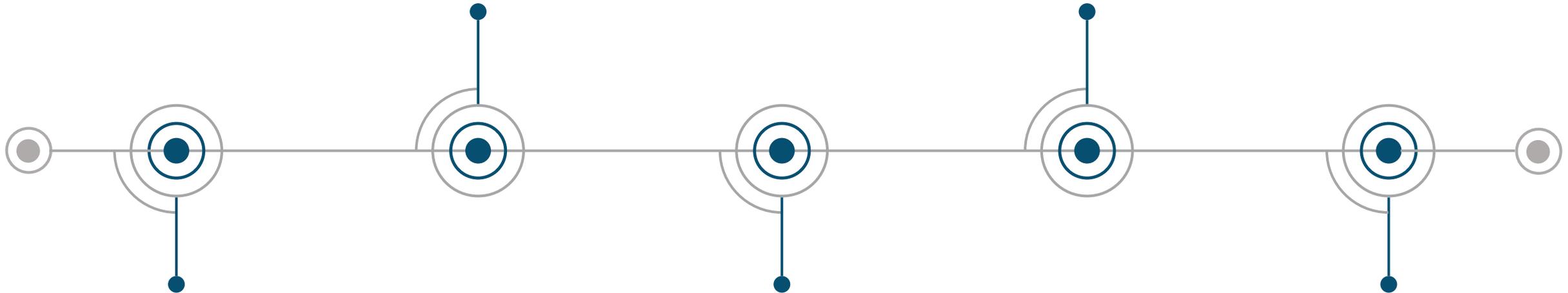
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## Review custom options

Consider all custom options and configurations available and consult your sales rep for recommendations.

## Send drawings

Send in a sketch, line drawing, CAD drawing or Google Maps photo with areas of coverage.



## Start the calculations

Evaluate the types of hazards, elevations and obstructions on the roof.

## Take measurements

Take all necessary measurements of the site and send them to our estimator to generate a quote.

## Review pricing

Pricing will be provided by our estimator. Drawings will be provided with the order to allow installers to have a clear idea of where all of the components are to be positioned.





# QUESTIONS TO CONSIDER

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Are my rooftop openings properly guarded to comply with current working at heights laws?	
Am I, or any of my staff working within 6' of the roof edge and require fall protection?	
Do I need access to multiple rooftop elevations?	
Are there trip hazards on my rooftop?	
Is there frequently accessed equipment on my roof that may pose a risk?	



# RELATED PRODUCTS

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# FIXED ACCESS LADDERS AND LADDERGUARD

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When you require access to your rooftop, but don't have a rooftop hatch, a fixed access ladder is one of the safest ways to access your rooftop.

We design, engineer, fabricate, inspect and install fixed access ladders. Our fixed access ladders can be customized for your specific application and custom-designed to meet even the most stringent requirements.

When you have created a regular access point to your roof or an elevated platform, you have created an unprotected leading edge. **LadderGuard** solves this potential problem with a system of guardrails designed to create an egress away from the leading edge of your rooftop.



# WARNING LINES

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Warning Lines / Bump Lines prevent falls by alerting workers to fall hazards. Warning lines should be set up around the work area at least 2 meters (6 feet 6 inches) from unprotected edges.

When a work area is enclosed by properly installed and maintained warning lines, work inside the area can be done without additional fall protection measures.

Includes:

- Base plates – X shaped base
- Post – 42' vertical pipe inserted in base plates to support cable and flags
- Cable – 500 lbs. breaking strength
- Flags – secured at no more than 6 ft intervals





# WHAT'S INCLUDED WITH YOUR PARTNERSHIP?

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# DEDICATED TEAM

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We have a dedicated team of sales reps and a large, highly trained dealer network across North America who are here to assist you.

Simply email or call – we're ready to answer your questions!

- **Phone:** (519) 896-2430 or 1-800-977-2005
- **Email:** [info@liftsafegroup.com](mailto:info@liftsafegroup.com)



# ACCESS TO MARKETING MATERIALS & SERVICES

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Branded materials are available at your request and include:

- Brochures
- Catalogues
- Power Points
- Price lists
- Specification sheets

Our online Dealer Portal provides easy access to all product information, literature and training needed.



# PRODUCT TRAINING & SUPPORT

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Your account representative will provide detailed training on our product lines and services. Learn about:

- Our quoting process
- Product details
- Manufacturing process

For Customer Support please do not hesitate to reach out to our team at the contact information below.

- **Phone:** (519) 896-2430 or 1-800-977-2005
- **Email:** [info@liftsafegroup.com](mailto:info@liftsafegroup.com)





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