# BROCHURE

## **UNISTRUT**<sup>®</sup>**PP** FALL PROTECTION SYSTEMS

## UNISTRUT® FALL PROTECTION CAPABILITIES BROCHURE

Overhead Systems • Roof Applications • Vertical Lifelines • Specialty Applications

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## **Engineered Fall Protection Expertise**

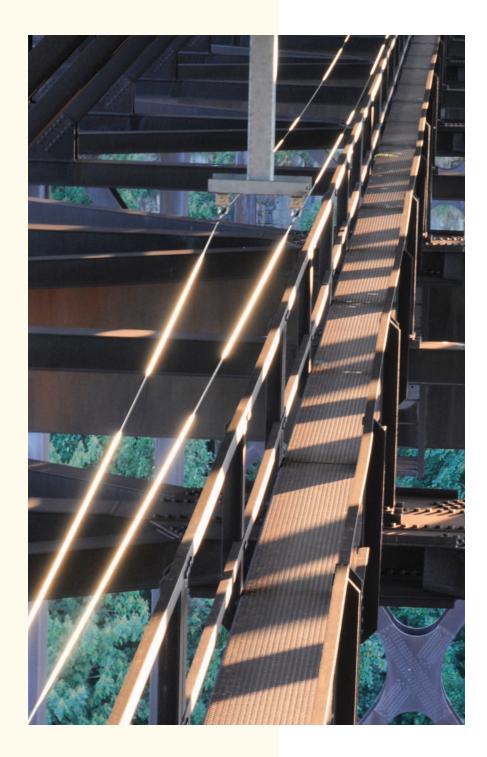
Unistrut Construction is the specialty contracting division of Unistrut International Corporation. We have been an industry leader for over 60 years as a nationwide company with conceptual design, engineering and installation services.

The Fall Protection division was created to address the ever-changing needs of our customers. Our experience, capabilities and resources enable us to provide a turn-key solution every time.

Our staff of engineers and installation teams has the ability to design and carry-out even the most difficult projects in a safe and economical manner.

We take responsibility for each phase of the project. Our certification of acceptance (permanently attached to each system) is your assurance of the most competent system design and installation.

Our engineered systems meet or exceed, various safety standards such as CSA, ANSI, and OSHA as well as State and Provincial safety and building codes.







## **Services**

Unistrut Fall Protection offers the following services to ensure that your fall protection system meets OSHA/ANSI requirements, but most importantly keeps workers safe.

#### **Turn-Key Installations**

We have the engineering, fabrication and installation capabilities to provide the system that is most suitable for your application. From initial phone call to installed system, you can anticipate a seamless process that exceeds your expectations.

#### Inspections

Our certified installers examine and document every part of the engineered systems that they inspect. We will provide a complete, competent and professional OSHA and ANSI inspection.

#### Training

We have the capability to provide specific task based training for all of your employees. We train to change attitudes and behavior, which translates into a safe workplace. We can accommodate your needs by conducting the training on location or in our own facilities.

#### Consulting

Our consultants are ready to take on the next challenge and create a safer working environment before anyone has to be exposed to a fall. Systems and training specific to the application are key to safety and productivity of every employee. With the advances in equipment and the writing of task based regulations customized installations are an absolute necessity for employees.

#### **Notification Services**

Our fall protection systems certification tool will help to keep your systems in compliance with ANSI/OHSA requirements. These standards call for documented inspections of all fall protection systems at least once a year and every 6 months in some cases.

We offer a free online tool that will send you an e-mail reminder as to when your system is due for inspection. You can then schedule an appointment with one of our certified inspectors for a comprehensive examination of your fall protection system.





## **Overhead Fall Protection Systems**

Unistrut has the experience and engineering capabilities to meet your overhead fall protection requirements. These are suitable for applications such as: aircraft, buses, railcars, tanker trucks, or specialty needs such as plant manufacturing equipment.

#### **Overhead Lifeline Systems**

The Unistrut overhead horizontal fall protection system is a unique product designed to provide safe working at heights and safe access to a variety of otherwise dangerous situations. It also has the capability to restrain personnel from putting themselves at risk.

The overhead trolley is secured to the system during installation and allows the user to navigate through intermediate supports spanning up to 30 meters without interruption.

#### **Overhead Rigid Rail Systems**

Unistrut offers a rigid rail system that requires less fall clearance, unlimited system length, and a concealed track which keeps the system free of dust, dirt, and debris.

This system is ideal for applications in which a horizontal lifeline will not meet your fall protection requirement. This primarily occurs in applications where fall clearance is a factor. Since our rail systems are "rigid" we eliminate cable sag. Cable sag is a significant problem since it may cause the system to be unable to effectively stop the worker from hitting the ground.



#### CASE STUDY Engineered Overhead Fall Protection System

#### Task:

Create a fall protection system to protect workers loading and unloading tanker trucks at designated silo stations at the side of a manufacturing building.

#### Solution:

After visiting the site our engineers uncovered a unique set of challenges on this particular project. First, the cable needed to be placed over the centerline for the entire 52 foot length of the tanker truck. This would eliminate any swing fall hazards and allow workers to safely access all points of the 16ft high vehicle. Secondly, the support columns needed to be attached directly to the concrete pads that support the silos. This required additional engineering analysis to determine that the concrete pad could support the added weight of the fall protection system. The end result was a system that was 220ft in length with two 80ft spans and one 60 foot span supporting two workers simultaneously.

### Roof Top & Vertical Fall Protection Systems

#### **Roof Top Fall Protection Safety System**

Unistrut offers unique products to solve your roof top fall protection requirements. Depending on your need it may be determined that single point anchors will accomplish the task or a more in-depth horizontal lifeline may be required.

Applications include: rooftop safety for maintenance, inspections, mechanical unit repairs, skylights, roof hatch, and solar system maintenance.

#### **Engineered Lifeline Systems**

Our turn-key engineered horizontal lifeline systems allow workers to navigate across the roof in a safe and effective manner. Our engineers will visit the site and determine the most efficient equipment based on the application.

Our lifeline systems have a unique feature that allows the worker to navigate the roof while never "unhooking" from the system and maintaining true 100% fall protection. The system uses stainless steel components which are suitable for the harshest environments.

#### **Energy Absorbing Anchors**

The Unistrut FP management post was developed for use on roof structures that are unable to accommodate a structural anchor connection. This provides a more efficient, and economical, solution as reinforcement steel is not required allowing a more flexible design.

Each post is an "energy" absorbing unit that allows the system to be placed anywhere on the roof with minimal penetration. It can be adapted to most standing seam roofs by clamping on to the seam without penetrating the roof.

#### **Unistrut Free-Standing Safety Roof Railing**

Unistrut free-standing roof railing systems are 100% engineered and tested to meet OSHA's requirements for guardrail systems. These are designed to not penetrate the roofing system and can be painted any color to ensure an aesthetically pleasing appearance.

#### **Vertical Fall Protection System**

#### Slidelock Safety System

Unistrut offers the Slidelock safety system to arrest falls when climbing or descending vertical or near vertical industrial ladders and other similar access ways.

The system is comprised of an integral energy absorbing lanyard and karabiner used in conjunction with Arresta-rail. Each system must meet a minimum dynamic load requirement. A proof load test is included as part of each contract.





#### CASE STUDY Engineered Roof Top Protection System

#### Task:

Determine the roof top fall protection requirements to help protect maintenance workers performing routine tasks.

#### Solution:

Our engineers went on-site to perform a complete analysis. Since the roof was a standing seam profile, they determined that a travel restraint system using Latchways ManSafe Constant Force Post was the best option. This allows the worker to gain access to the edge of the roof without physically falling over.

This product uses a patented clamping system that does not require roof penetration or structural attachment to the building. This is vital on a standing seam roof profile. An added benefit is the ease of installation which enabled us to minimize plant downtime.





## Specialty Applications

#### Dams

Unistrut has the products and services required to ensure your dam is accessible in a safe manner. Our horizontal lifelines can be designed and engineered to allow a worker to walk uninterrupted the entire length of the lifeline. Dams also present vertical and incline hazards as well. Protective cages may not always be suitable. Our vertical/incline lifeline systems accomplish this task and allow safe access no matter the height of the ladder or angle of the incline.

#### **Arenas & Stadiums**

Rigging for events, concerts, plays and shows has to be done in a safe and timely manner and not just any engineered system will work. Theaters present many areas that weren't designed for people to safely access and stadiums present even bigger challenges.

Our fall protection systems are installed to promote accessibility and flexibility to cover all of the work areas. Working with facilities personnel we are able to design a complete fall protection system that is adapted to each specific building.

#### Bus

Bus designs have been changing, so that more of the power, fuel, cooling and electrical systems are now on the roof of the bus creating a fall hazard. Most bus maintenance workers have never been exposed to a fall hazard and are not familiar with fall protection equipment. This makes designing a userfriendly system paramount.

Our goal is to design the most unobtrusive, practical system available. We will evaluate the existing structure, get input from the operator and determine the optimal type of system based on need.

#### **Pipe Racks**

Our systems allow for elevation changes, variable turns, 90 degree turns, while staying attached to the lifeline system without the need to "hook and unhook" at intermediate supports.



#### Railcar

Many loading/unloading areas in rail yards have minimal fall clearances and no sound overhead structures. Others are adjacent to buildings that do not have the structural capability of supporting a fall arrest system.

In these instances a new structure must be added in the form of additional steel, caissons and/or inverted "L" towers. All of these solutions allow structurally sound attachment points for your highly specialized safety system.

#### CASE STUDY Engineered Crane Rail Fall Protection System

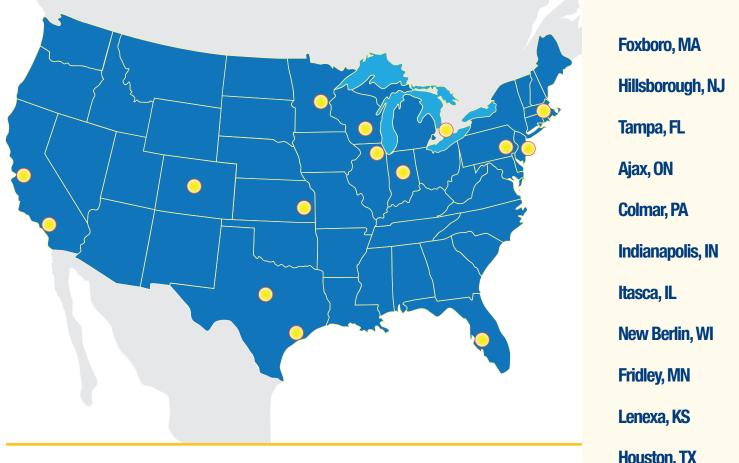
#### Task:

Design a crane rail fall protection system that allows simultaneous access by multiple-users along its entire 800 foot length.

#### Solution:

After a thorough site analysis, our engineering staff determined that the best approach would be to install the ManSafe Transfastener directly to the columns. Our engineered custom design consisted of spacing the product every 30 feet on center, with the cable installed at 5'5" to minimize free-fall distance. The ManSafe Transfastener is ideal for routine crane rail maintenance because it will allows the worker 100% hands-free movement along the length of the lifeline. This system maximizes worker efficiency by eliminating the need to "hook and un-hook" while walking down the line. This enables the worker to carry tools and other equipment in hand while performing maintenance.

### **Locations**



With 15 offices in North America and certified union installation crews, you can be confident in our ability to keep your workers safe.

Houston, TX **Grand Prairie, TX** Denver, CO **Union City, CA** Anaheim, CA



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