FALL PROTECTION
QUICK REFERENCE GUIDE

RIGID LIFELINES®
Promise to Perform Industries, Inc.

THE BASICS

WHEN IS FALL PROTECTION REQUIRED?

According to the Occupational Safety and Health Administration, fall protection must be provided at elevations of:

- **4 FT** in general industry workplaces
- **5 FT** in shipyards
- **6 FT** in the construction industry
- **8 FT** in longshoring operations

In addition, OSHA requires that fall protection be provided when working over dangerous equipment and machinery, regardless of the fall distance.

HIERARCHY OF FALL PROTECTION

When a fall hazard has been identified, the hierarchy of fall protection should be used to determine which type of solution is best suited for the application.

1

HAZARD ELIMINATION

- Most preferred and effective method
- Modify to work on ground level

2

PASSIVE FALL PROTECTION

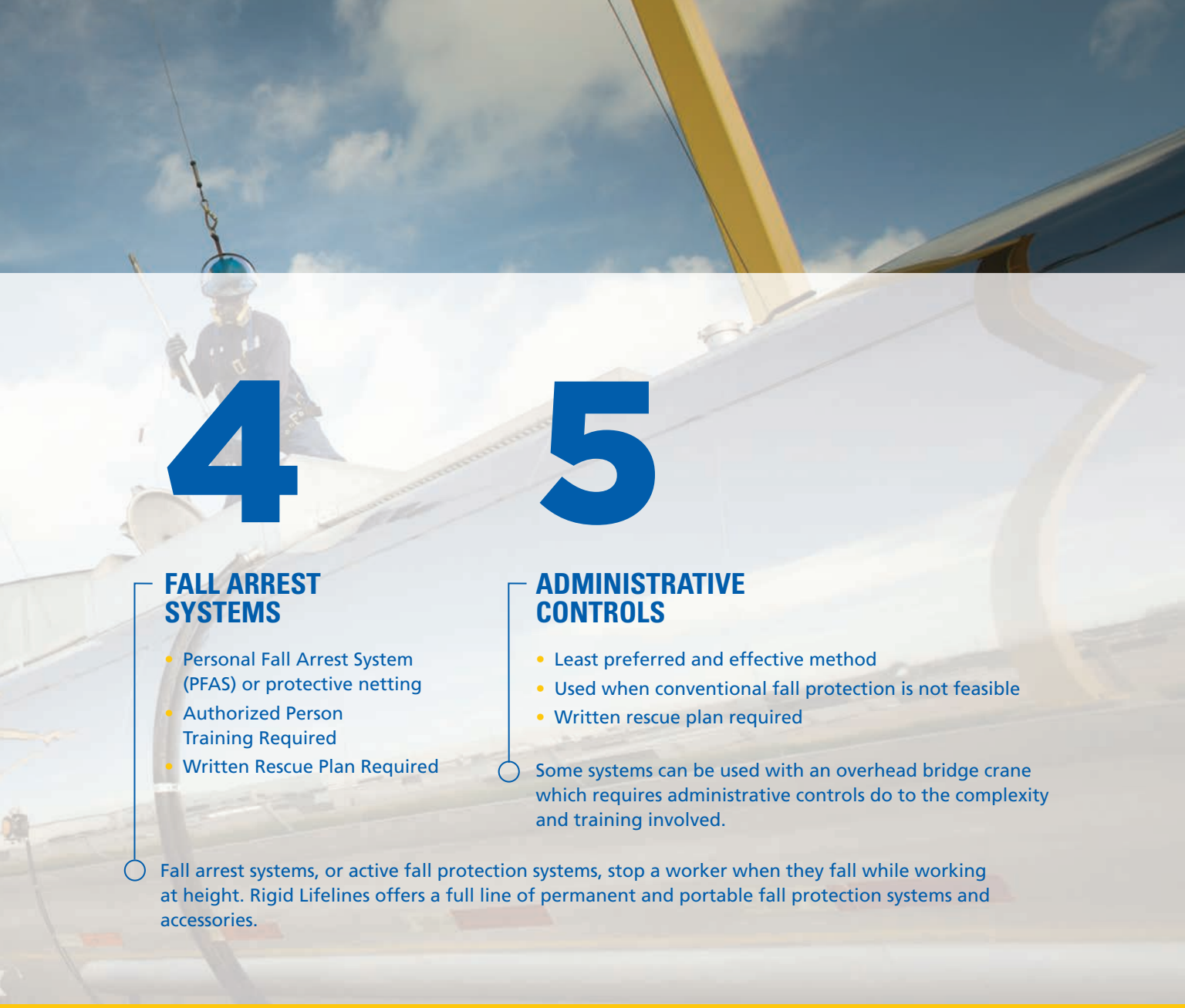
- Includes physical barriers, such as guardrails or parapets
- Minimum training necessary
- Written rescue plan recommended

3

FALL RESTRAINT SYSTEMS

- Restraint System Required (full-body harness, lanyard, anchor, and body belt)
- Authorized Person Training Required
- Written Rescue Plan Required

The goal of a fall restraint system, also called a passive fall protection system, is to keep workers from reaching the fall hazard. Side-mounted enclosed rigid track can keep workers from a leading edge or dangerous equipment when traditional guardrails get in the way.



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FALL ARREST SYSTEMS

- Personal Fall Arrest System (PFAS) or protective netting
- Authorized Person Training Required
- Written Rescue Plan Required

Fall arrest systems, or active fall protection systems, stop a worker when they fall while working at height. Rigid Lifelines offers a full line of permanent and portable fall protection systems and accessories.

5

ADMINISTRATIVE CONTROLS

- Least preferred and effective method
- Used when conventional fall protection is not feasible
- Written rescue plan required

Some systems can be used with an overhead bridge crane which requires administrative controls do to the complexity and training involved.

Rigid Lifelines is an industry leader in overhead fall arrest and fall restraint solutions. Our patented Anchor Track™ systems are designed to meet all applicable OSHA and ANSI standards and keep workers safer when working at height.

THE ABCs OF FALL PROTECTION

A fall protection system is composed of three key parts: the anchorage, bodywear, and connecting device.

A

ANCHORAGE

Is commonly referred to as a tie-off point, such as an I-beam, rebar, scaffolding, or rigid track system.

ANCHORAGE CONNECTOR

Is the component used to join the connecting device (shock lanyard or self-retracting lifeline) to the anchorage.

B

BODYWEAR

Is the personal protective equipment worn by a worker at height, such as a full-body harness.

C

CONNECTING DEVICES

The critical link that joins the full-body harness (body wear) to the anchorage connector. Connecting devices can consist of energy-absorbing lanyards, self-retracting lifelines, rope grabs, or retrieval systems.

RIGID LIFELINES SYSTEMS

Rigid Lifelines Anchor Track™ Systems address the A (Anchorage) in the ABCs of Fall Protection.

PERMANENT ANCHOR TRACK SYSTEMS

Our permanent fall protection systems can be foundation mounted, ceiling mounted, or wall mounted.

Ceiling-Mounted Monorail

Inverted-U

Post Suspension

Traveling Bridge

Fold-Away

Inverted-L

T-Frame

Column-Mounted Swing Arm

Freestanding Swing Arm

MOBILE ANCHOR TRACK SYSTEMS

Our mobile fall protection systems offer convenient mobility and our reliable Anchor Track.

Griffin™ Skidded System

Griffin™ Wheeled System

Portable Box Frame

Portable Base Swing Arm

Rolling A-Frame
(Fixed or Adjustable Height)

SAFETY FACTOR 2

According to OSHA 1910.66 App C (I)(10) - Anchorages to which personal fall arrest equipment is attached shall be capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two, under the supervision of a qualified person. All Rigid Lifelines Anchor Track Systems are designed to meet a safety factor of two.

CONSIDERATIONS

CHOOSING A FALL PROTECTION SYSTEM

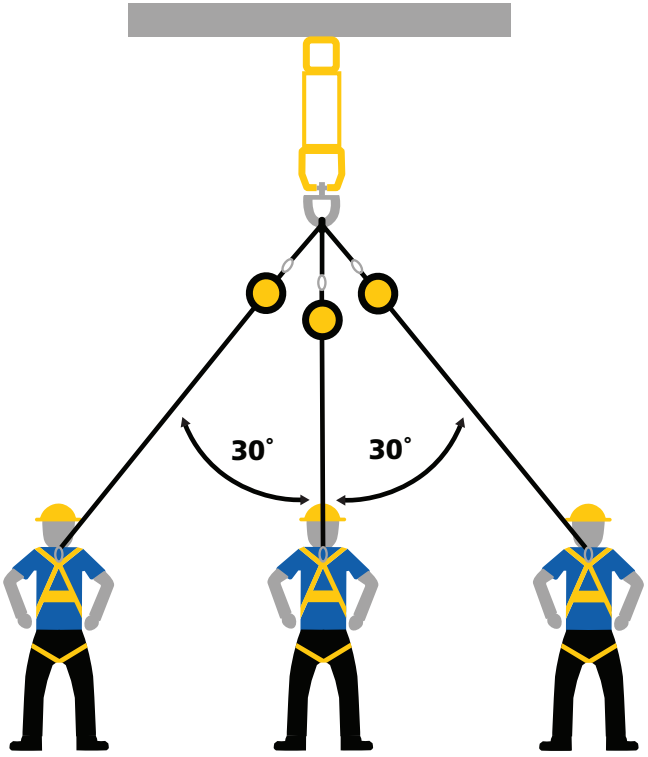
Fall protection systems make working at height safer, but there are still dangers. There are many factors to consider when choosing the right fall protection system for an application.

PREVENTING SWING FALL HAZARDS

The anchor should be located directly over the worker's head to avoid a swing fall hazard.

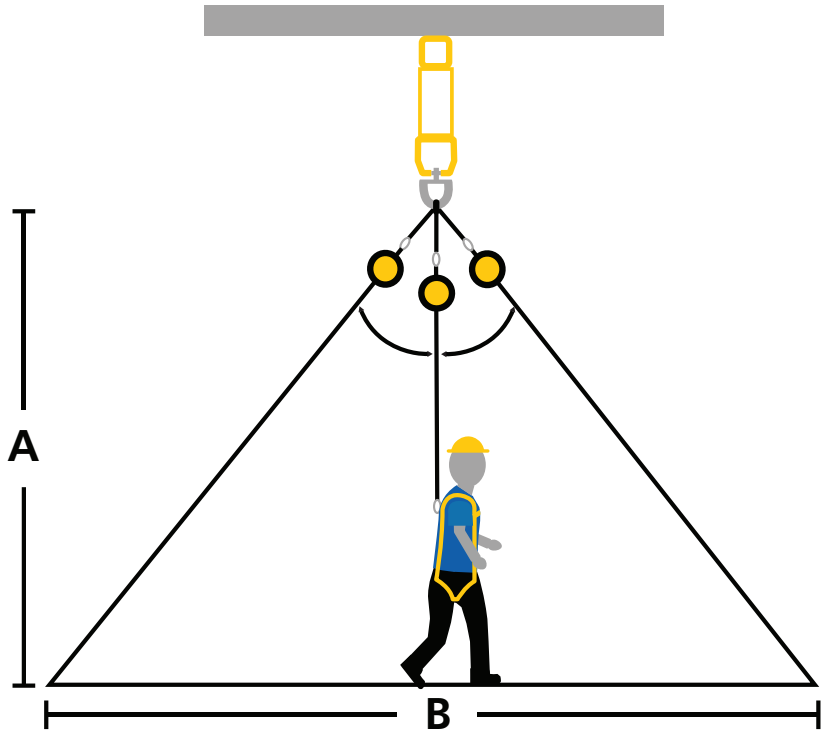
Even if a fall is stopped by a system, there is still risk to the worker. Swing fall injuries occur when a worker is more than 30 degrees off center of the anchor, or out of range of what the system was designed for, which causes them to swing and potentially hit nearby objects.

Choose a fall protection system and design where the anchor can remain over the workers head within 30 degrees no matter where the worker is when performing their tasks. Most Rigid Lifelines Systems are designed for 30-degree off-center usage.



HEIGHT TO COVERAGE WIDTH CALCULATOR

Keep in mind that the higher your anchor point is, the larger the work area you can have (max of 30 degrees).



30° CHART

Hook to Surface (A)	Coverage Width (B)
10′-0″	11′-6″
11′-0″	12′-8″
12′-0″	13′-10″
13′-0″	15′-0″
14′-0″	16′-2″
15′-0″	17′-3″
16′-0″	18′-5″
17′-0″	19′-7″
18′-0″	20′-9″
19′-0″	21′-10″
20′-0″	23′-0″
21′-0″	24′-2″
22′-0″	25′-4″
23′-0″	26′-6″
24′-0″	27′-7″
25′-0″	28′-9″
26′-0″	29′-11″
27′-0″	31′-1″
28′-0″	32′-3″
29′-0″	33′-4″
30′-0″	34′-6″
31′-0″	35′-8″
32′-0″	36′-10″
33′-0″	37′-0″
34′-0″	39′-1″
35′-0″	40′-3″

WHY TRACK?

Other fall protection solutions may have a cheaper upfront cost, but the downsides quickly outweigh the benefits.

TRACK VS. CABLE SYSTEMS

Instead of deflecting, a rigid track stops the fall and lowers impact forces applied to the system. With a cable system, the deflection (sag) can make rescue more difficult.

Ease of Movement

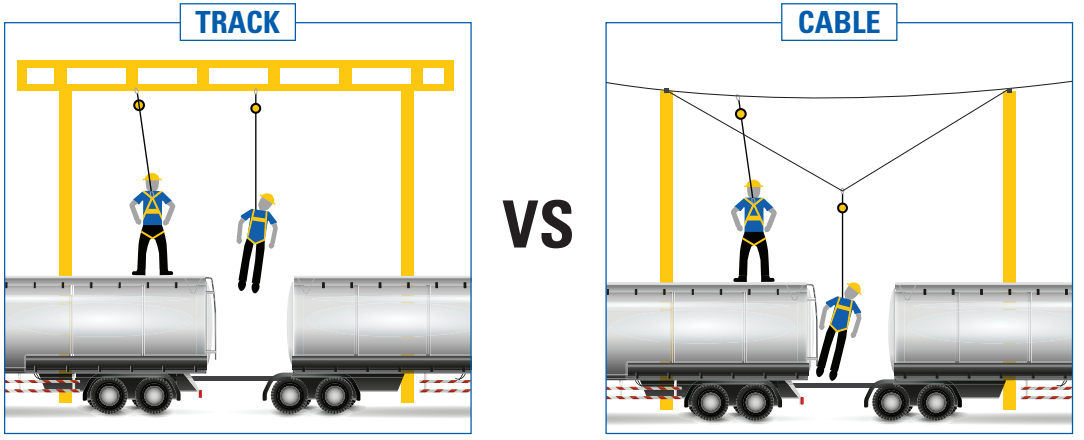
- Track systems are higher quality and easier to use
- Track and trolley design smoothly follows worker overhead hands free

Minimal Maintenance

- Enclosed track design means no moisture or debris build up, which impede trolley movement. Cable is an exposed surface subject to buildup which can slow the worker down and cause downtime for cleaning.

Reduced Cost after a Fall

- A Rigid Lifelines system is designed to be reused after a fall event. Cable systems often need components replaced before the system can be used again.

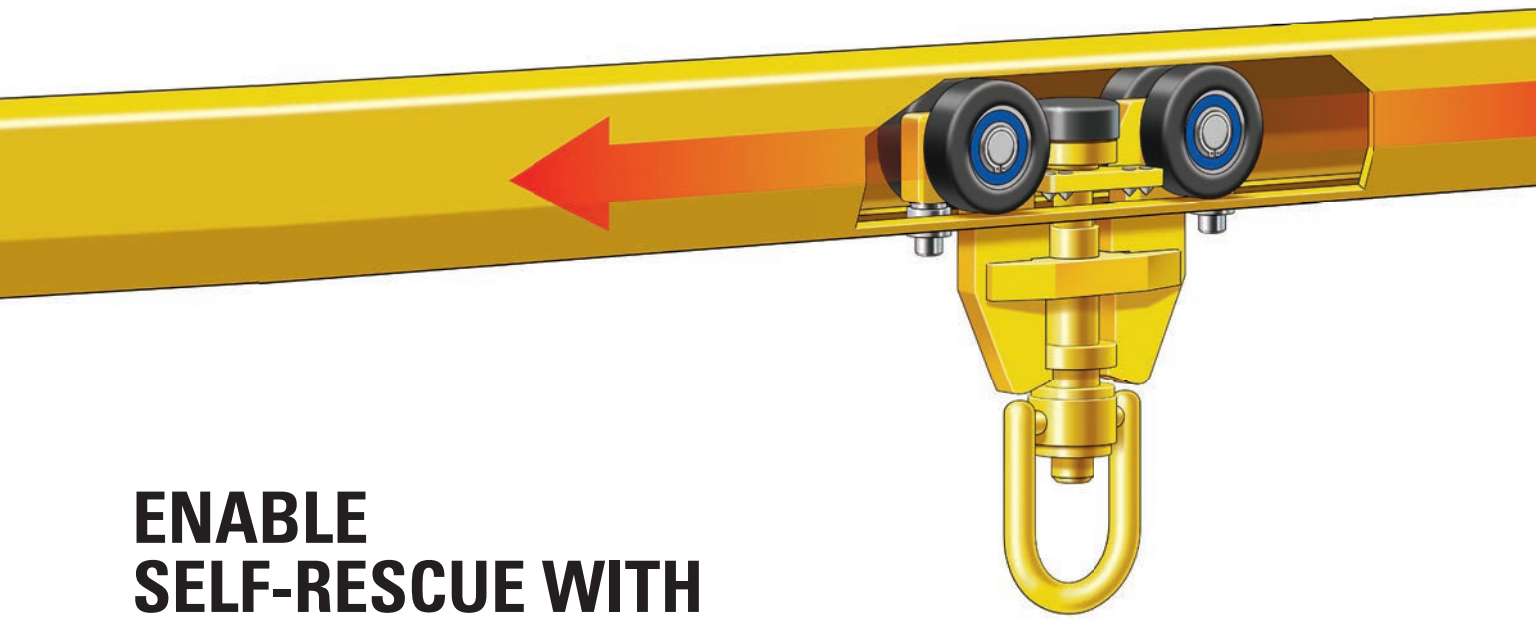


THE IMPORTANCE OF A QUICK RESCUE

Having a written rescue plan and being able to rescue a fallen worker quickly is crucial regardless of which type of fall protection system is used.

Within OSHA 1910.151, Medical Aid, the regulation uses the word "prompt," which is supported by a letter of interpretation that suggests "prompt" as being able to provide medical aid within four minutes if there is a potential for injury or 15 minutes if the program administrator deems there is no potential injury to the fallen worker.

ANSI, in comparison, defines prompt rescue as contact with the worker in less than six minutes.



ENABLE SELF-RESCUE WITH THE ANCHOR TROLLEY™

During a fall event, the force of the fall generates energy that propels the worker along the track away from where they fell. When this unintentional travel happens, the worker could potentially hit a nearby object or roll into an area where rescue is difficult.

The Rigid Lifelines Anchor Trolley™ is a key differentiator to similar track products in the market. The Anchor Trolley features a braking system that engages during a fall event and virtually eliminates post fall drift and increases the possibility that the worker could self-rescue by stepping back onto the working surface.

FEATURES

- Reduces drifting on the track after a fall event
- Increases the chances for self-rescue
- Comes standard with Anchor Track Systems from Rigid Lifelines

WITHOUT
ANCHOR TROLLEY

WITH
ANCHOR TROLLEY

SUSPENSION TRAUMA

Suspension Trauma is the medical phenomenon of limited blood flow from being suspended in a full-body harness for long periods of time. If a fallen worker is not rescued promptly, suspension trauma can be lethal, even without other injuries sustained during the fall event.

BODYWEAR & CONNECTING DEVICES

Choosing the best bodywear and connecting devices to complete a fall protection system comes next.

BODYWEAR

Take the individual user's needs into consideration. How long will the worker be wearing a harness each day? How easy is the harness to take on and off? What is the application? Harnesses come with many features and comfort levels, but the more important factors are finding a harness that fits the user correctly and has five points of adjustment.

CONNECTING DEVICES

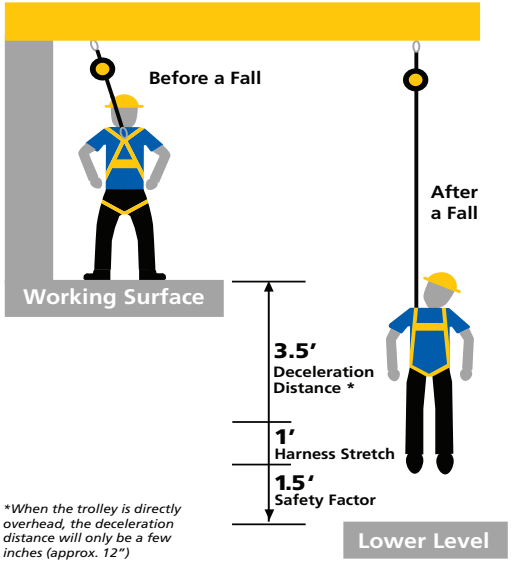
Consider the length of the Self-Retracting Lanyard (also called SRL or SRD) needed, the working environment, and whether a cable or web lifeline is ideal.

ANSI Z359.14 provides all of the criteria a SRL must meet to be considered safe. It's divided into two classes: class 1 and class 2. These classes define the arrest distance an SRL can pay out before it stops and how much force can be applied to the worker using the SRL.

CLASS 1

Self-Retracting Lanyard

Allow a greater maximum arrest distance at 42". With a greater arrest distance, Class 1 SRLs are limited to an average arresting force of no more than 1,350 lbs.



*When the trolley is directly overhead, the deceleration distance will only be a few inches (approx. 12")

CLASS 2 — REFERENCE INFORMATION ONLY

Self-Retracting Lanyard

Not applicable to standard Rigid Lifelines products.

Requirements

- Meets Class 1 standards
- Tested at foot level with 310 lbs weight
- Arrest distance printed on label and instructions.

Class 2 Clearance Chart

Set-Back Distance (X)	Distance off Axis of Anchorage (Y) 0'	2'	4'	6'	8'	10'
2'	18.50'	19.33'	20.97'	WARNING! WORKING IN THIS ZONE MAY RESULT IN SERIOUS INJURY OR DEATH.		
4'	18.50'	18.97'	20.16'	21.71'		
6'	18.50'	18.82'	19.71'	20.99'	22.50'	
8'	18.50'	18.75'	19.44'	20.50'	21.81'	
10'	18.50'	18.70'	19.27'	20.16'	21.31'	
12'	18.50'	18.67'	19.15'	19.92'	20.92'	22.12'
14'	18.50'	18.64'	19.06'	19.73'	20.62'	21.70'
16'	18.50'	18.62'	18.99'	19.59'	20.39'	21.37'
18'	18.50'	18.61'	18.94'	19.47'	20.20'	21.09'
20'	18.50'	18.60'	18.90'	19.38'	20.04'	20.86'
	Clearance Required (Z)*					

*Includes 2' Safety Margin

RIGID LIFELINES®

Promise to Perform Industries, Inc.

READY TO LEARN MORE?

Visit **RigidLifelines.com** for more information about Rigid Lifelines Anchor Track™ Systems or contact your local Rigid Lifelines distributor.

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