

# FAST Guide to Fall Protection

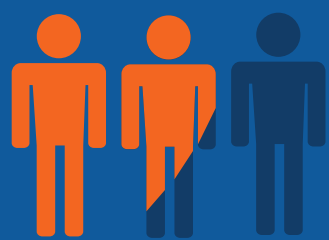
## Fall Protection Saves Lives

Areas where workers are subjected to possible fall hazards are prevalent in almost every industry. The Bureau of Labor Statistics reported there were 660 fatal falls on the job in 2014 alone. Falls, slips and trips also accounted for the second highest number of workplace injuries the same year.

Falls on the job resulting in injury or death are 100% preventable with proper fall protection equipment. A comprehensive fall protection plan prevents injuries, saves lives and makes good business sense. Check out the information below to help you get started on a fall protection program for your business today.



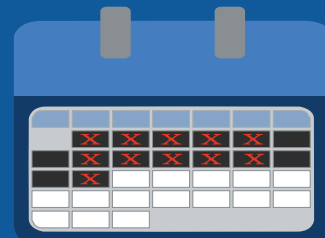
**17%**  
of workplace fatalities  
were caused by  
falls, slips or trips



nearly  
**2 out of 3**  
of all fatal falls  
were from a distance of  
20 feet or less



**27%**  
of all workplace injuries  
were caused by  
falls, slips or trips



Resulting in a  
median of  
**11** days  
missing work

All workplace injury/fatality statistics are based on the Bureau of Labor Statistics 2014 Injuries, Illness, and Fatalities report.

## Creating A Fall Protection Program



### Step 1: Hazard Identification

The first step in a well-conceived fall protection program is identification of all fall hazards in the workplace. As a general rule, any time a worker is at a height of greater than 4 feet a fall hazard exists according to OSHA. This is extended to 6 feet in construction applications. Once hazards are identified they should be eliminated or fall protection equipment must be required.



### Step 2: Written Fall Protection Program

Following hazard identification, a written site-specific program needs to be developed with detailed work procedures to protect all workers. The plan should include which fall protection/prevention measures are to be used, how they are to be used, a rescue plan, and who is responsible for training and overall supervision.



### Step 3: Product Selection

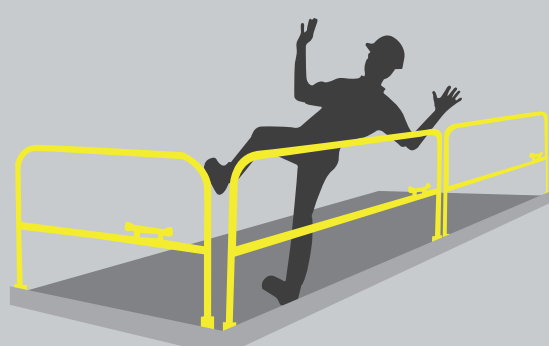
The employer must understand the different types of fall protection products available and decide which would be most suitable for their specific application. Fall protection equipment can vary based on the amount of space available as well as how the worker is using the equipment. Employers need to be sure to consider the range of motion an employee needs while working as well making sure the equipment fits safely in the area it is to be used.



### Step 4: Training

All workers must be trained under careful and competent supervision before using any fall protection products. Workers must be able to identify potential fall hazards; determine which fall protection equipment to use in specific applications; demonstrate proper anchoring techniques; inspect and maintain equipment; and demonstrate the proper wear and fit of all fall protection equipment.

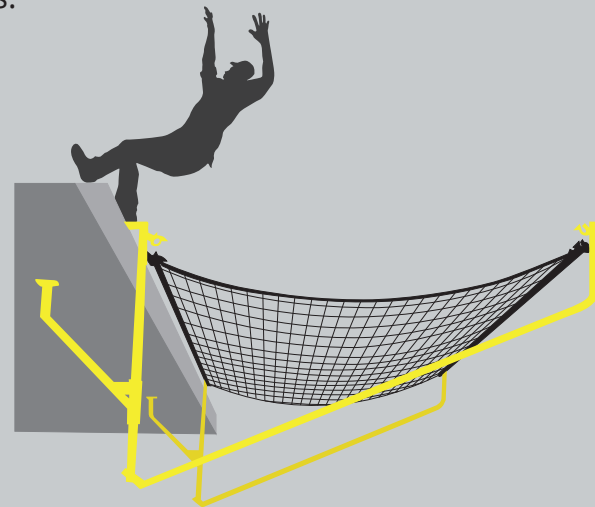
## Types Of Fall Protection Equipment



### Guardrail Systems

Guardrail systems are barriers erected to prevent workers from falling to lower levels. When using a guardrail system refer to OSHA standard 29 CFR 1926.502(b) for information on properly installing the system such as height and location requirements.

### Safety Net Systems



Safety nets must be installed as close as practicable under the walking or working surface on which the workers are working and never more than 30 feet below that level. All safety nets must be installed with sufficient clearance underneath to prevent a falling body from hitting the surface or structure below the net.



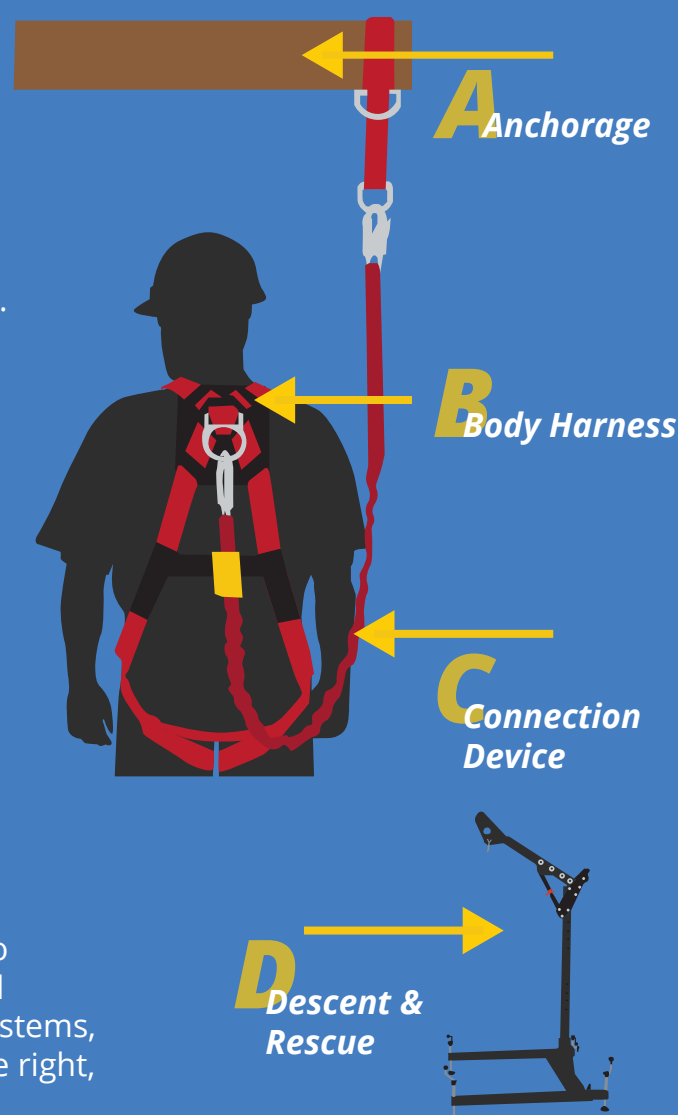
### Personal Fall Arrest Systems

Personal fall arrest systems are used to safely stop (arrest) a worker who is falling from a working level. It consists of an anchorage, connectors, and a body harness. It may also include a lanyard, deceleration device, lifeline or a combination of these.

*Note: OSHA recognizes the three types of fall protection equipment above as "conventional fall protection". Other fall protection systems such as warning lines, controlled access zones and safety monitoring systems are also accepted, however they are required to be accompanied by a written fall protection plan highlighting the reasons why conventional fall protection is unsafe or infeasible in the specific application.*

## The A-B-C-D's Of Fall Arrest Systems

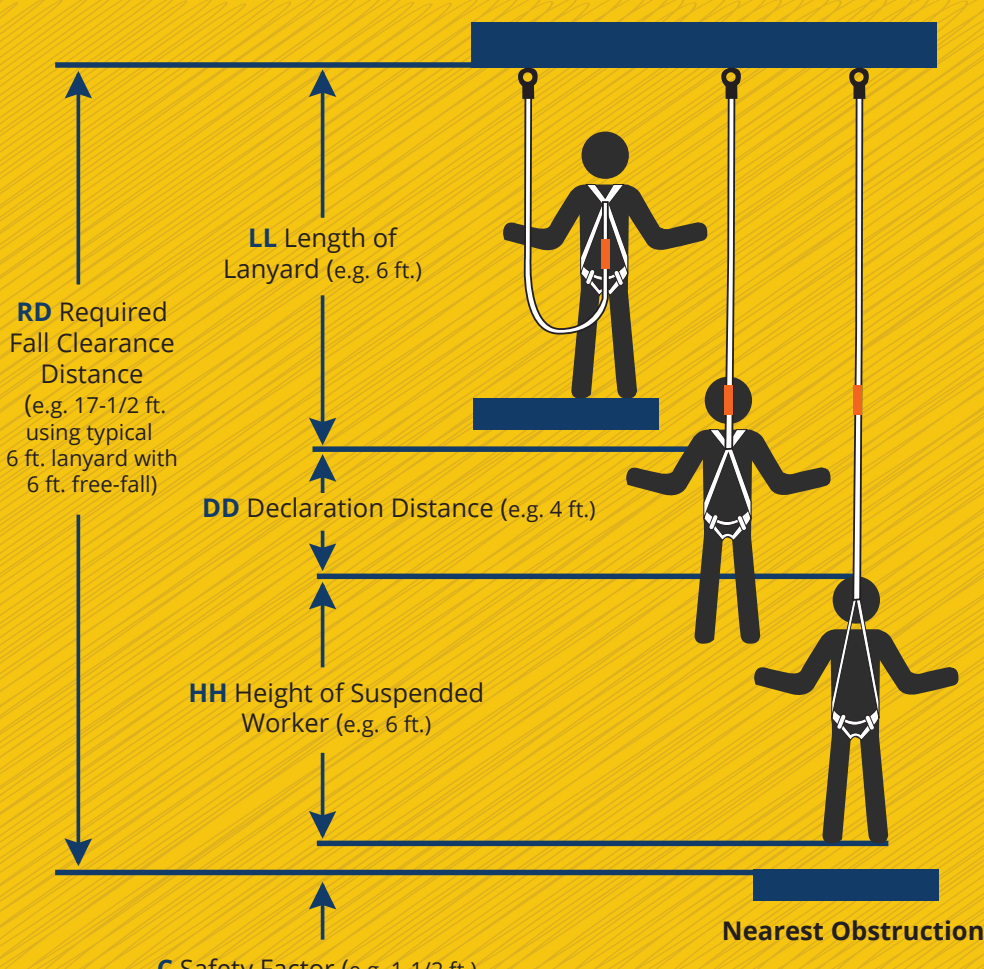
- A Anchorage**  
As defined by OSHA, an anchorage is a secure point of attachment for lifelines, lanyards or deceleration devices. It may be a beam anchor, cross-arm strap, D-bolt, hook anchor, tripod, davit or other secure device and must be capable of supporting 5,000 lb per employee attached.
- B Body Harness**  
A body harness, or body support, is the component that is worn on or around the torso. A full body harness distributes fall arrest forces across the shoulders, thighs and pelvis. Body belts are considered positioning devices only and are not considered a full fall arrest system.
- C Connection Device**  
The connection device is the critical link which joins the body wear to the anchorage and connectors. It can be an energy-absorbing lanyard, fall limiter, self-retracting lanyard, rope grab or retrieval system. Connection types vary based on applications and work restrictions.
- D Descent & Rescue**  
When using a fall arrest system it is important to have a rescue plan and equipment ready to assist a fallen worker to safety. Descent and rescue equipment is available in user controlled and automatic styles depending on the user's application. Some examples are self-rescue systems, decent/descender devices and hoist systems. Hoist systems, as shown in the example to the right, are most commonly used for rescues from confined spaces.



## Calculating Fall Distance

$$RD = LL + DD + HH + C$$

1. Add 1 ft. to **LL** for free-fall over 6 ft. up to 12 ft. or for person over 310 lbs. up to 420 lbs. with 6 ft. maximum free-fall for ANSI & OSHA compliant lanyard.
2. Add 1.7 ft. to **DD** for Canadian Z259.11-05 (E6) compliant lanyard.
3. D-ring slide and harness stretch factors are built into **HH** and **C**.
4. **DD** shown in the example assumes maximum allowable amounts.
5. See user instruction manual for product specific information.



## Fastenal Safety Specialists

Still unsure how to start your own Fall Protection Program?  
Contact our safety specialists for help today.

Competent Inspector/Person Training

Fall Protection Inspection

SRL Inspection

Cost Savings Ideas

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Sources:

<http://www.bls.gov/iif/>

<https://www.osha.gov/SLTC/fallprotection/standards.html>

<https://img.fastenal.com/content/documents/2014/06/Calculating-Your-Fall-Distance.pdf>