

INFORMATION FOR YOUR SAFETY

FYS

Anchorage Strength

Fall Arrest

- **ANSI Z359.2007:** The structure to which the personal fall arrest system is attached must sustain static loads applied in the directions permitted by the fall arrest system of at least 5,000 lbs for non-certified anchorages, or two times the maximum arresting force for certified anchorages (designed by qualified person).
- When more than one personal fall arrest system is attached to an anchorage, the strengths stated above must be multiplied by the number of personal fall arrest systems attached to the anchorage.
- **OSHA 1926.502 and 1910.66:** Anchorages used for attachment of a personal fall arrest system shall be independent of any anchorage being used to support or suspend platforms, and must support at least 5,000 lbs per user attached; or 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.

Restraint/Travel Restraint*

- **ANSI Z359.2-2007:** The structure to which the restraint system is attached must sustain static loads applied in the directions permitted by the restraint system of at least 1,000 lbs for non-certified anchorages, or two times the foreseeable force for certified anchorages.
- When more than one restraint system is attached to an anchorage, the strengths stated above must be multiplied by the number of restraint systems attached to the anchorage.

* OSHA Standards do not include information on restraint anchorage points.

Positioning/Work Positioning

- **ANSI Z359.2-2007:** The structure to which the work positioning system is attached must sustain static loads applied in the directions permitted by the work positioning system of at least 3,000 lbs, or twice the potential impact load, whichever is greater.
- **ANSI Z359.2-2007:** Anchorages for work positioning systems shall have strength capable of sustaining loads of 3,000 lbs for non-certified anchorages or two times the foreseeable force for certified anchorages.
- When more than one work positioning system is attached to an anchorage, the strengths stated above must be multiplied by the number of work positioning systems attached to the anchorage.

Personnel Riding

- The structure to which the personnel riding system is attached must sustain static loads applied in the directions permitted by the personnel riding system of at least 2,500 lbs. When more than one personnel riding system is attached to an anchorage, the strengths stated above must be multiplied by the number of personnel riding systems attached to the anchorage.

Rescue*

- **ANSI Z359.2-2007:** The structure to which the rescue system is attached must sustain static loads applied in the directions permitted by the rescue system of at least 3,000 lbs for non-certified anchorages, or five times the applied load for certified anchorages. When more than one rescue system is attached to an anchorage, the strengths stated above must be multiplied by the number of rescue systems attached to the anchorage.

*OSHA Standards do not include information on rescue anchorage points.

The ABCs of Fall Protection

A typical Personal Fall Arrest System (PFAS) incorporates three components, often described as the ABCs of fall protection: the anchorage/anchorage connector, the body support and the connecting device. When used together, these three components form a complete system for maximum worker protection. Also necessary are the descent and rescue devices used to retrieve a fallen worker.

A Anchorages: are a secure point of attachment. Anchorage connectors vary by industry, job, type of installation and structure. They must be able to hold fast under more than a ton of force generated in a fall.

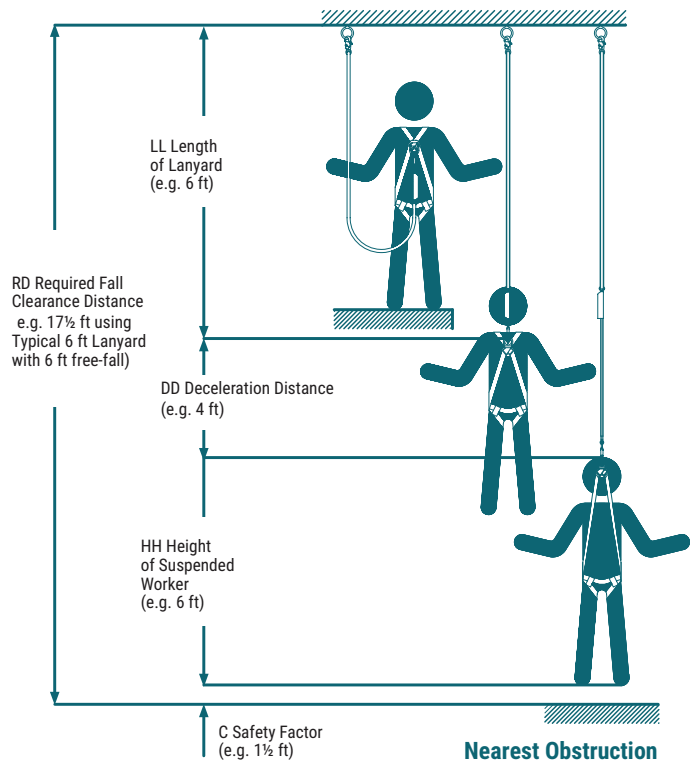
B Body Support: harnesses distribute fall forces over the upper thighs, pelvis, chest and shoulders. They provide a connection point on the worker for the personal fall arrest system.

C Connectors: such as shock absorbing lanyards or self retracting lifelines connect a worker's harness to the anchorage.

D Descent and Rescue: devices are used to retrieve an injured worker or lower him to the ground.

Calculating your Fall Distance

Measure from Rigid Anchor Point



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

- Add 1 ft to DD for free-fall over 6 ft up to 12 ft or for person over 310 lbs up to 420 lbs with 6 ft max. free-fall for ANSI & OSHA compliant lanyards.
- Add 1.7 ft to DD for Canadian CSA Z259.11-05 (E6) compliant lanyard.
- D-ring slide and harness stretch factors are built into HH and C.
- DD shown in e.g. assumes maximum allowable amounts.