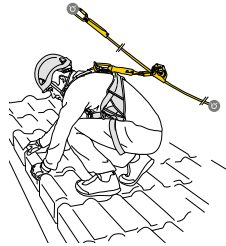




SAFETY & REGULATORY CONSIDERATIONS On Sloped Surfaces

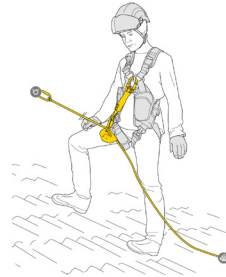
FALL PROTECTION ON SLOPED SURFACES

Dorsal vs. Sternal Attachment



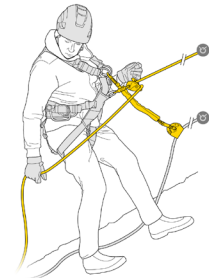
A personal fall arrest system is connected to the harness's dorsal D ring, but when a potential free fall is less than two feet, the system can be connected to the harness's sternal D ring. *(Check with local jurisdiction)*

Roofs and Sloped Surfaces



When working on a sloped surface, a mobile fall arrester offers the advantage of freely following the user, both up and down without any manual operation.

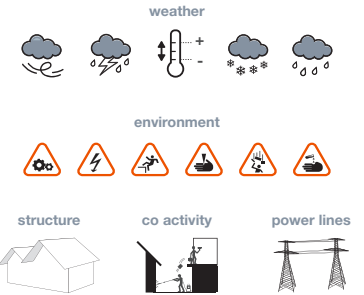
Positioning on Steeper Surfaces



An independent positioning system can be used in conjunction with the personal fall arrest system to protect a worker on a steep sloped roof (greater than 4/12 pitch or 18.4°).

JOB SAFETY ANALYSIS

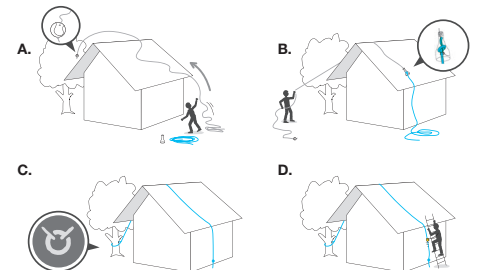
Check Work Conditions



Recommended Actions & Procedures



TECHNIQUES FOR THE FIRST CLIMBER



WHY IS FALL PROTECTION SO IMPORTANT?

The most recent data from the Bureau of Labor Statistics shows that 880 workers died in falls in 2019. This accounts for more than 16 percent of all job-related fatalities that year. In the construction industry, that rate was even higher — more than one in three (36.4%) fatalities recorded in 2019 were fall related, making it the leading cause of work-related deaths in construction.

Sources: National Census Of Fatal Occupational Injuries In 2019 - US Bureau of Labor Statistics, Construction Statistics - National Institute for Occupational Safety and Health (NIOSH)

1 FULL BODY HARNESS

Full body harnesses are designed to minimize stress forces on an employee's body in the event of a fall, while providing sufficient freedom of movement to allow work to be performed.

2 CONNECTORS

Connectors used in personal fall arrest systems shall:

- have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- have a minimum tensile strength of 5,000 pounds (22.2 kN).
- be proof-tested to a minimum tensile load of 3,600 pounds (16 kN) without cracking, breaking, or taking permanent deformation.

3 LIFELINES

Lifelines shall have a minimum breaking strength of 5,000 pounds (22.2 kN).

- Each employee shall be attached to a separate lifeline.
- Lifelines shall be protected against being cut or abraded.

4 FALL ARRESTER

A fall arrester is a deceleration device that travels on a lifeline and automatically engages the lifeline and locks so as to arrest the fall of an employee.

- A fall arrester usually employs the principle of inertial locking, cam/lever locking, or both.

5 PERSONAL FALL ARREST SYSTEM (PFAS)

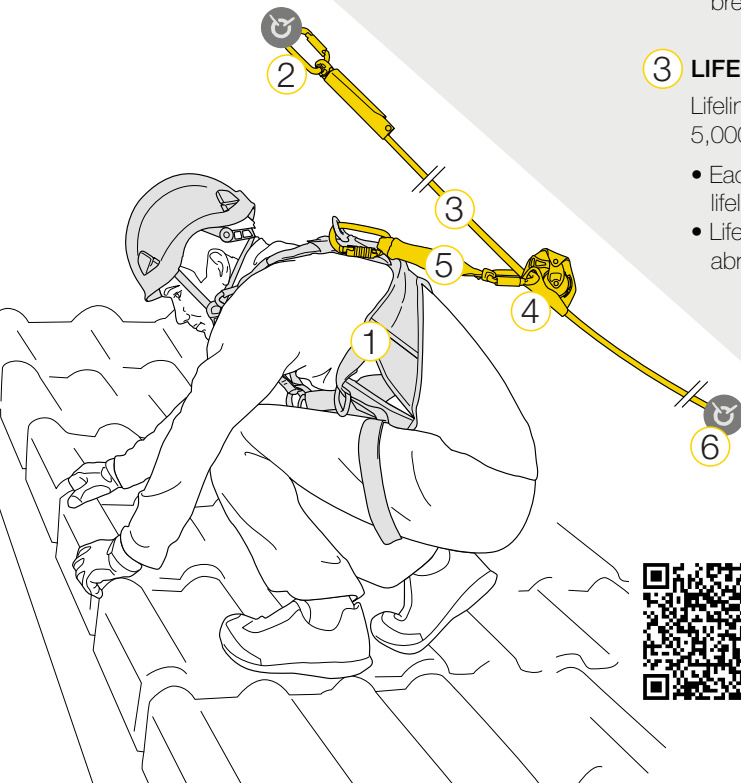
On construction sites, a PFAS is one option that OSHA requires for workers who are exposed to vertical drops of 6 feet or more. When stopping a fall, a personal fall arrest system shall:

- limit maximum arresting force on an employee to 1,800 pounds (8 kN) when used with a body harness;
- be rigged such that an employee can neither free fall more than 6 feet (1.8 m), nor contact any lower level;
- bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 m); and,
- have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet (1.8 m), or the free fall distance permitted by the system, whichever is less.

6 ANCHORAGES

Anchorage used for attachment of personal fall arrest equipment must be independent of any anchorage being used to support or suspend platforms, and capable of supporting at least 5,000 pounds per employee attached or must be designed and used as follows:

- 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.



Scan QR code to watch video on how Petzi's personal fall arrest system works on sloped surfaces.