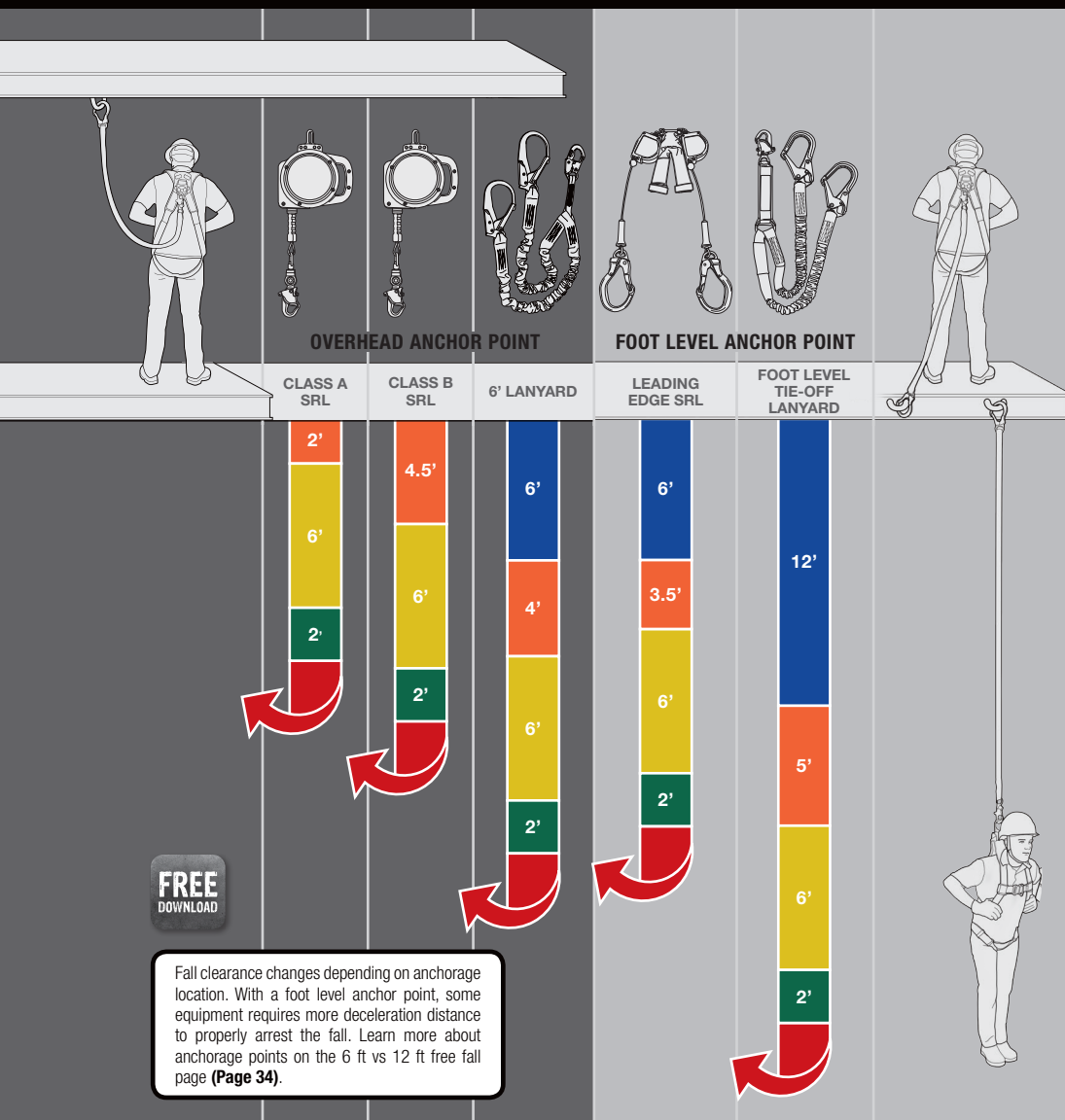




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FALL CLEARANCES 101



FREE FALL DISTANCE

Free fall is the distance covered before the fall arrest device engages or catches you. This distance varies for a couple reasons. Different devices take longer than others to engage. Your anchorage point also plays a part. See the 6 ft vs 12 ft free fall page for more information on this topic (Page 36).

DECELERATION DISTANCE

This is the distance required to fully arrest the fall. Once the device has caught, its energy absorber will require time and distance to stop you. Again, depending on the type of device, this distance can be just a few inches to multiple feet.

HEIGHT OF DORSAL D-RING

This is the typical average height of the dorsal D-Ring on a user's full body harness measured up from the walking working surface.

HARNES & D-RING SHIFT + SAFETY FACTOR

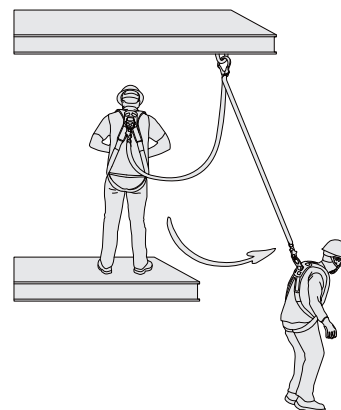
This is the combined amount of harness webbing elongation and dorsal D-Ring up-shift during the entire fall event. It's recommended to consider this additional distance as a safety factor.

SWING FALL

Swing fall occurs when your anchorage is not directly above you. This hazard is typically most associated with SRLs since you're able to work much farther from your anchorage point.

The device will stop a fall in the required distance, but the worker may still swing a great distance, similar to a pendulum. This potentially puts obstacles, walls, or even the ground in the path of the worker.

It is recommended to always work within a 30 degree safe zone from your anchor. If you must work farther away than this 30 degree safe zone, you must either transition to a different anchor, or consider using a mobile anchor, such as a beam slider (Page 63).



REGULATIONS

OSHA 1910.140

1910.140(c)(5)

Self-retracting lifelines and lanyards that automatically limit free fall distance to 2 ft (0.61 m) or less.

1910.140(d)(1)(ii)

Personal fall arrest systems must bring the employee to a complete stop and limit the maximum deceleration distance the employee travels to 3.5 ft (1.1 m).

OSHA 1926.502

1926.502(d)(16)(iv)

Personal fall arrest systems, when stopping a fall, shall bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 ft (1.07 m).

STANDARDS

ANSI Z359.13 - 2013

PERSONAL ENERGY ABSORBERS & ENERGY ABSORBING EQUIPMENT

3.1.8.1

6 ft free fall personal energy absorbers shall have a maximum deployment distance of 48 inches.

3.1.8.2

12 ft free fall personal energy absorbers shall have a maximum deployment distance of 60 inches.

Always refer to manufacturer's specifications. Proper fall protection training is required before performing any at-height work.