

WORKING WITH SCAFFOLDS -- ERECTING AND PROPER USE

Workers building scaffolds risk serious injury from falls and tip-overs, being struck by falling tools and other hazards, and electrocution from energized power lines. Before starting any scaffold project, the employer should conduct a hazard assessment to ensure the safety of workers.

Tube and Coupler Scaffolds

A tube and coupler scaffold has a platform(s) supported by tubing, and is erected with coupling devices connecting uprights, braces, bearers, and runners (see Fig. 1). Due to their strength, these scaffolds are frequently used where heavy loads need to be carried, or where multiple platforms must reach several stories high. These scaffolds can be assembled in multiple directions, making them the preferred option for work surfaces with irregular dimensions and/or contours.

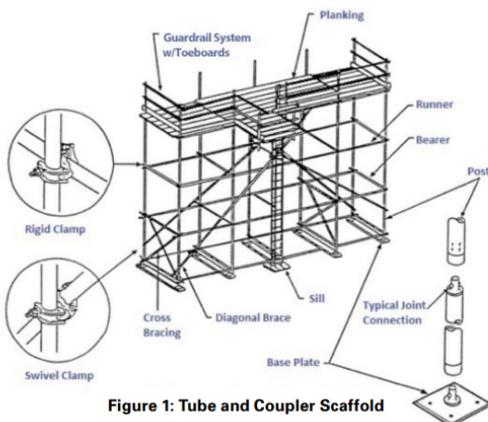


Figure 1: Tube and Coupler Scaffold

When Erecting a Scaffold

- Use footings that are level, sound, rigid and capable of supporting the load without settlement or displacement.
- Plumb and brace poles, legs, posts, frames, and uprights to prevent swaying and displacement.
- Position the first level of bracing as close to the base as possible.
- Plumb and level the scaffold as it is being erected.
- Fasten all couplers and/or connections securely before assembling the next level.
- Install guys, ties, and braces according to the manufacturer's recommendations.
- Do not intermix scaffold components from different manufacturers, unless you can do so while maintaining the scaffold's structural integrity.
- When platform units are abutted together to create a long platform, each abutted end must rest on a separate support surface.
- Once erected, provide toeboards on all railed sides to prevent falling object hazards.

For more information, visit:

<https://osha.llr.sc.gov>

When Using a Scaffold

Overhead and buried power lines are especially hazardous because they carry dangerously high voltage. Fatal electrocution is the main risk, but burns and falls are also hazards.

Make sure you:

- Look for overhead power lines and buried power line indicators.
- Stay at least 10 feet away from overhead power lines and assume they are energized.
- De-energize and ground lines when working near them.
- Use non-conductive wood or fiberglass ladders when working near power lines.

Extension Cords

Worn cords can expose the wires within, or loosen the connections on the plug end. Extension cords that are not 3-wire type, not designed for hard-usage, or that have been modified are not as durable. These conditions can increase the risk of electric shock.

- Use equipment that is approved by a nationally recognized testing laboratory.
- Do not modify cords or use them incorrectly.
- Use factory-assembled cord sets and extension cords that are 3-wire type.
- Use cords, connection devices, and fittings equipped with strain relief.
- Remove cords from receptacles by pulling on the plugs, not the cords.

Equipment

Due to the dynamic, rugged nature of construction work, normal use of electrical equipment causes wear and tear that results in insulation breaks, short-circuits, and exposed wires. If there is no ground-fault protection, it can cause a ground-fault that sends current through a worker's body.

Use ground-fault circuit interrupters (GFCIs) on all 120-volt, single-phase, 15- and 20-ampere receptacles that are not on an existing building's permanent wiring, or have an assured equipment grounding conductor program (AEGCP).

- Use double-insulated tools and equipment, distinctively marked.
- Visually inspect all electrical equipment before use. Remove from service any equipment with frayed cords, missing ground prongs, cracked tool casings, etc.

Electrical Incidents

If the power supply to the electrical equipment is not grounded or the path has been broken, fault current may travel through a worker's body, causing electrical burns or death. Visually inspect electrical equipment before use. Take any defective equipment out of service.

- Ground all power supply systems, electrical circuits, and electrical equipment.
- Frequently inspect electrical systems to ensure that the path to ground is continuous.
- Do not remove ground prongs from cord- and plug-connected equipment or extension cords.
- Use double-insulated tools and ground all exposed metal parts of equipment.
- Avoid standing in wet areas when using portable electrical power tools.

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