



CONFINE THE HAZARDS:

Safe Work Practices for Confined Spaces in Construction

Whether you are a fitter, plumber, HVAC technician, or sheet metal worker performing construction work, using safe work practices will help you protect yourself and others from hazards in and around confined spaces.

A Confined Space

- One or more workers can get their bodies inside;
- The space has limited or restricted access; and
- It is not designed for continuous human occupancy

Classifications

Permit required: Spaces with a hazardous atmosphere or physical/safety/health hazards.

Non-permit required: Spaces where hazards are eliminated or controlled without entry, and the basis for reclassification is carefully documented.

Potential Hazards

Oxygen content below 19.5% workers can't breathe efficiently – over 23.5% increases risk of combustion.

Flammable gasses or vapors can cause fire or explosion.

Toxic air contaminants can incapacitate workers and cause fatalities.

Physical hazards can cause death or physical damage (electrical conductors, stored energy, excessive heat, etc.).

Standards for Authorized Entrants

Before entering a confined space, make sure:

- You have completed all necessary training and are authorized to enter.
- The competent person has cleared the space for entry.
- An attendant is stationed outside.
- You are wearing a full body harness attached to a fixed point, or other acceptable rescue equipment.

When working inside a confined space:

- Communicate frequently with the attendant so he can assess your status.
- Alert the attendant immediately if you detect signs of danger.

- Evacuate the space immediately if:
 - The attendant gives an evacuation order.
 - You detect a dangerous or prohibited condition.
 - The evacuation alarm is activated.

When performing your work:

- Check that pipes, pumps or lines are disconnected, or otherwise isolated.
- Make sure the ventilation system is working properly.
- Ensure that continuous atmospheric monitoring is performed near your breathing zone.
- Check your ventilation fan CFM rating to ensure adequate air changes.
- Be aware of potential external hazards, such as sewer line vapors or vehicle emissions.
- Never bring fuel-gas or oxygen tanks into a confined space.
- Remove torches and hoses from the space as soon as you complete hot work.
- If flammable gasses or vapors could be present:
 - Use only Class 1, Division 1-rated electrical equipment.
 - Use non-sparking tools.
 - Do not perform hot work.

Standards for Attendants

When working as an attendant:

- Remain right outside the entrance and continually monitor activities.
- Communicate verbally or electronically with each entrant frequently.
- Warn unauthorized persons to stay away. If they go inside, alert entrants and contact the entry supervisor.
- Evacuate the space immediately if:
 - You become aware of a prohibited condition.
 - An entrant is experiencing behavior effects.
 - An external situation could endanger the entrants.
 - You are unable to perform your job effectively or safely.
 - You lose communication with the entrants.

Be prepared to perform a non-entry rescue:

- Keep rescue equipment easily accessible.
- Summon rescue services immediately if an entrant needs assistance.
- Do not enter the space if a non-entry rescue fails, unless you are qualified, and authorized to do so.