

# HVAC Technician Safety Fact Sheet

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**H**eating, ventilation, and air conditioning (HVAC) technicians keep Texas workplaces comfortable and running year-round. But the job often means working with live electricity, heavy equipment, refrigerants, sharp metal, rooftops, attics, and tight spaces — sometimes all in the same day.

These conditions can change quickly. A missed step on a ladder, contact with energized parts, or a refrigerant leak can cause serious injury in seconds. Strains from lifting, cuts from sheet metal, and exposure to heat or poor air quality are also common.

Understanding the hazards before starting work and taking time to use safe work practices can prevent most injuries.



## Common HVAC job hazards

HVAC technicians may face:

- Electrical shock or arc flash from energized equipment.
- Falls from ladders, roofs, or elevated platforms.
- Cuts from sheet metal and moving fan blades.
- Muscle strains from lifting or carrying heavy units.

- Exposure to refrigerants, cleaning chemicals, or poor ventilation.
- Heat or cold stress in attics, rooftops, or outdoors.
- Possible asbestos exposure in older buildings.

Recognizing these risks early helps you plan safer work methods.

## Safe work practices that protect technicians

Before starting any installation, maintenance, or repair work, take time to control the hazards around you.

- **Control electrical energy.** Always shut off power and follow [lockout/tagout procedures](#) before opening panels or servicing equipment. Test circuits to verify they are de-energized. Never assume power is off.

- **Use proper personal protective equipment (PPE).**  
Safety glasses, gloves, and sturdy footwear should be standard on every job. Hearing protection may be needed around loud equipment. Respirators may be required when working around dust, mold, insulation fibers, or chemical vapors.
- **Handle refrigerants and chemicals carefully.**  
Read labels and [Safety Data Sheets](#) (SDS). Store cylinders properly, work in ventilated areas, and avoid skin or eye contact. Refrigerants can displace oxygen and some chemicals can burn or irritate the lungs.
- **Work safely at heights.**  
Inspect ladders before use and place them on stable surfaces. Maintain three points of contact while climbing. Use fall protection when working on rooftops or near open edges.
- **Protect your hands and body.**  
Sheet metal edges, belts, and rotating parts can cause deep cuts or crush injuries. Wear cut-resistant gloves and keep loose clothing, jewelry, and hair away from moving equipment.
- **Lift and move equipment safely.**  
HVAC components are often bulky and heavy. Use mechanical aids, carts, or team lifts when possible. Lift with your legs, not your back.
- **Be aware of the work environment.**  
Attics, crawlspaces, and mechanical rooms may have extreme temperatures, limited airflow, or poor air quality. Take breaks, drink water, and watch for signs of heat stress or cold stress. If a space has restricted entry or could contain low oxygen, refrigerant leaks, or other hazardous atmospheres, follow your employer's confined space procedures and testing requirements before entering.
- **Keep work areas organized.**  
Good housekeeping prevents slips, trips, and falls. Secure tools, manage cords, and remove debris as you work.
- **Slow down and follow procedures.**  
Rushing, skipping steps, or working while fatigued increases the chance of injury. Follow manufacturer instructions and your company's safety plan every time.

### OSHA standards that may apply to HVAC work

Depending on the task, OSHA standards may include:

- **Control of hazardous energy (lockout/tagout)** – [29 CFR 1910.147](#).
- **Personal protective equipment** – [1910 Subpart I](#).
- **Respiratory protection** – [1910.134](#).
- **Hazard communication (chemical safety)** – [1910.1200](#).
- **Asbestos** – [1910.1001](#).
- **Walking-working surfaces and fall protection** – [1910 Subpart D](#).
- **Permit-required confined spaces** - [29 CFR 1910.146](#).
- **Machine and Machine Guarding** - [29 CFR 1910.212](#).
- **Compressed gases (general requirements)** - [29 CFR 1910.101](#).
- **Welding, Cutting, and Brazing** - [29 CFR 1910 Subpart Q](#).
- **Hand and Portable Powered Tools and Other Hand-Held Equipment** - [29 CFR 1910 Subpart P](#).
- **Potable water (for drinking and washing)** - [1910.141\(b\)\(1\)\(i\)](#).
- **General requirements (housekeeping)** – [1910.22](#).

Employers must provide training and protective equipment required by these standards.



### Older buildings may require extra caution

Some older HVAC systems or insulation materials may contain asbestos. Disturbing these materials can release harmful fibers into the air. If you suspect asbestos or other hazardous materials, stop work and report the concern so your employer can test the area and put controls in place.

### The bottom line

HVAC work is skilled, hands-on, and essential, but no repair or installation is worth an injury. Taking a few extra minutes to plan the job, use protective equipment, and follow safe work practices can help ensure every technician goes home safe at the end of the day.



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