



COMPRESSED AIR SYSTEMS PIPING

Toolbox Talks for the members of Iowa Association of Municipal Utilities

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Compressed air is versatile and adaptable; it easily flows through pipes and valves, quickly filling a space. It can be compressed to higher pressures, stored as energy, and used to perform many types of work processes. Compressed air is considered a power source like gas, electricity and water, and is often referred to as the fourth utility. 12% of all industrial electricity consumption is to produce compressed air.

Pressurized air in piping, though safe and useful, can be dangerous if your system is not designed with approved components.

Thermoplastics, such as PVC, are not recommended for use in compressed air applications due to its highly crystalline structure. Under pressure, air will compress, generating a high potential energy. Both the ANSI/CAGI B19.1, Safety Standard for Air Compressor Systems and the Compressed Air and Gas Institute's reference book, the Compressed Air and Gas Handbook, are the recognized industry safety standards and prohibit the use of PVC piping for compressed air. OSHA has also published a Safety and Health Information Bulletin (SHIB) that restates the prohibition of using this material in pressurized systems.

OSHA requires that the nozzle pressure of an air gun used for cleaning purposes remain below 30 psi for all static conditions. This type of nozzle is called a pressure-reducing safety nozzle. Ensure that 'water hose' clamps are never used in place of quick disconnect air couplings.



Always wear the appropriate eye and hearing protection when working compressed air. Never use compressed air to clean your clothes or body.

- Pressurized piping should be located away from passageways where vehicles or forklifts could come in contact with it but still be accessible for maintenance.
- Don't forget to install pressure relief valves between the compressor and shut-off valves to prevent over-pressurization.
- Regard with caution and do not use unless properly trained.