

*Pneumatic tools, which are powered by compressed air, are widely used in industrial and construction settings and have become popular with the do-it-yourselfer as well. Common pneumatic hand tools include buffers, nailing and stapling guns, grinders, drills, jackhammers, chipping hammers, sanders, and wrenches. Although pneumatic tools take some special handling, they actually save a great deal of time and effort and are relatively easy to use. They are often less expensive and lighter in weight than their electric power tool counterparts.*

There are several potential dangers associated with the use of pneumatic tools. The main hazard is being struck by one of the tool's attachments (e.g., a drill bit) or by the fastener the tool is discharging (e.g., staples). Pneumatic tools that discharge nails, rivets, or staples and operate at pressures more than 100 pounds per square inch should be equipped with a special device to keep fasteners from being ejected unless the muzzle is pressed against the work surface.

### Basic Pneumatic Tool Safety

- Use the right tool for the job and review the manufacturer's instructions before using any tool.
- Do not operate the tool at a pressure above the manufacturer's rating.
- Wear safety glasses or a face shield, safety shoes or boots, and hearing protection.
- Set up screens or shields in areas where nearby workers may be exposed to flying fragments, chips, dust, and excessive noise.
- Ensure that the compressed air supplied to the tool is clean and dry. Dust, moisture, and corrosive fumes can damage a tool. An in-line filter, regulator, and lubricator may increase the life of the tool.
- Keep tools clean, lubricated, and maintained according to the manufacturer's instructions.

- Disconnect tools when not in use, before servicing, when clearing a jammed fastener, and when changing accessories such as bits and cutters.
- Use only the attachments that the manufacturer recommends for the tools you are using.
- Attachments, such as chisels on a chipping hammer should be secured with a safety clip or retainer to prevent them from being unintentionally ejected during tool operation.
- Make sure that the tool is fastened securely to the hose. A short wire or positive locking device attaching the air hose to the tool serves as an added safeguard.
- Reduce physical fatigue by supporting tools with a counterbalance whenever possible.



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### Air Hoses

- If an air hose is more than 1/2 inch in diameter, a safety excess flow valve should be installed at the source of the air supply to shut off the air automatically in case of hose failure.
- Choose air hoses that have a minimum working pressure rating of 1035 kPa (150 psig) or 150% of the maximum pressure produced in the system, whichever is higher.
- Use hoses specifically designed to resist abrasion, cutting, crushing, and flexing.
- Keep hoses away from heat, oil, sharp edges, and potential physical damage.
- Check hoses regularly for cuts, bulges, and abrasions. Tag and replace, if defective.
- Blow out the air line before connecting a tool. Hold the hose firmly and blow away from yourself and others. This will help ensure there is no debris or water inside the hose.
- Use quick-disconnect safety couplings that bleed off downstream air pressure before disconnecting. Install the male end of the coupling on the tool.
- Turn off the air pressure to hose when not in use or when changing power tools.
- Do not carry a pneumatic tool by its hose.
- Avoid creating trip hazards caused by hoses laid across walkways or curled underfoot.

### Unsafe Use of Compressed Air

- Cleaning with compressed air is dangerous. You should not use compressed air for cleaning equipment or clothing; use vacuums, dusters, or brooms instead.
- If no alternate method of cleaning is available and compressed air must be used for cleaning, the nozzle pressure should remain below 207 kPa (30 psi). In addition, personal protective equipment and effective chip-guarding techniques should be used.
- Compressed air guns should never be pointed toward anyone.
- Users should never “dead-end” compressed air guns against themselves or anyone else.

### For Additional Information

Occupational Safety and Health Administration:

[www.osha.gov](http://www.osha.gov)

- Construction eTool

Compressed Air & Gas Institute: [www.cagi.org](http://www.cagi.org)