

Guardair Corp.'s Bert Perry notes OSHA standards apply to safety tools using compressed air

Bert Perry, marketing manager of Guardair Corp., recently addressed air gun safety in a question and answer interview with *Professional Tool & Equipment News*.

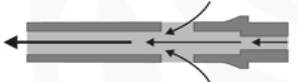
PTEN: Can you provide an overview of the OSHA standards as they apply to safety air tools that use compressed air?

Perry: Air guns utilize existing plant compressed air in their operation -- compressed air that can be extremely dangerous if misused, or if horseplay in the workplace takes place. Not only can workers be severely injured from the use of noncompliant, illegal air guns, but compliance failures can mean steep fines for violators. Although the OSHA standards pertaining to air guns are somewhat lengthy, the following images summarize OSHA's three main concerns:

1 Output Pressure

Factory air lines normally operate at pressures between 80 and 120 psi (pounds per square inch). Most pneumatic tools, including air guns, require such high pressures to operate effectively. However, OSHA requires that in the event such air lines are dead-ended (i.e. If the tip of an air gun is blocked) the static pressure at the point of the blockage may not exceed 30psi.

Normal Operation
Air exits nozzle tip (see illustration)



Nozzle with Dead-Ending Safety Feature
When nozzle tip is dead-ended, 100% of the flow exits through the side ports. Static pressure at the nozzle tip is held to less than 30psi, thereby satisfying OSHA Standards pertaining to Output Pressure.

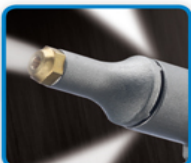


Relevant OSHA Standard:
29CFR Part 1910.242 (b) Hand and portable powered tools and equipment, general.
OSHA Instruction SDT 1-13.1
(OSHA Program Directive #100-1)

2 Chip Guarding

When blowing off debris with an air gun in close quarters, workers are subject to "chip fly-back". This term refers to the tendency of loose particles or chips to fly back into the operator's face, eyes or skin. For operations that require close-in work, OSHA mandates that "effective chip guarding" be incorporated into the workplace. One way to accomplish this is through innovative nozzle design.

Air Gun Nozzle with Chip Fly-Back Safety Feature
A portion of the main air flow is diverted through slots around the periphery of the nozzle to form a protective air cone. The protective air cone helps prevent chips and other debris from "flying back" towards the operator. This nozzle design, if dead-ended, allows 100% of the air flow to be diverted out the slots thus preventing blockage, thereby satisfying the OSHA Standards pertaining to both Chip Guarding and Output Pressure. (See photo)

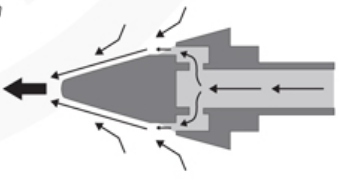


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3 Noise

To address excessive noise in the workplace OSHA has developed permissible daily noise exposure specifications. Since air guns can contribute to high levels of occupational noise, Safety Air Guns can be an important component in moving towards noise compliance.

Whisper Jet Nozzle
High-speed jets of air exit from the narrow slots around the periphery of the nozzle, adhering to the conical nozzle tip surface and drawing in the surrounding air. The net result is high thrust at low noise levels and savings of expensive compressed air. The solid conical tip also prevents blockage thereby satisfying OSHA Standards pertaining to Output Pressure. (See illustration)



Relevant OSHA Standard:
29CFR Part 1910.95 (a) Occupational Noise Exposure

For further details please see the attached document. You can also see more info on the Guardair website at http://www.guardaircorp.com/guardaircorp/osha_regulations.html

PTEN: What types of injuries have been associated with blow guns that use compressed air?

Perry: Eye injuries from flying debris and air embolisms from compressed air entering the body.

PTEN: Are some air guns and pneumatic vacuums built to automatically comply with OSHA standards?

Perry: Yes. All of our air guns comply with OSHA. We have one rubber tip nozzle that we sell separately that does not.

PTEN: Many people associate OSHA standards with manufacturing. Do the same type of safety issues exist in an automotive service environment?

Perry: Yes. The same rules apply to anyone who uses compressed air.

PTEN: Have there been any injuries in automotive service environments caused by hand tools that use compressed air?

Perry: We have found no instances of injuries in automotive service environments caused by hand tools that use compressed air.

PTEN: How important is noise exposure in an automotive service environment?

Perry: OSHA has regulations which require workplaces to be below a specific decibel level. Air guns add to noise pollution. There are a variety of Safety Air Guns available in the market, which are quiet and help lower, the dB.

PTEN: Have there been any OSHA violations pertaining to noise exposure in an automotive service environment?

Perry: We are unaware of any OSHA violations caused by noise exposure in an automotive service environment.

PTEN: Aside from OSHA rules, what liabilities and/or safety issues might an automotive service shop face with blow guns that use compressed air?

Perry: OSHA regs are put in place to protect workers. Aside from the chance a business could be fined from OSHA, there is the risk of physical harm from compressed air entering the body and causing an air embolism. To protect against this, it is important that an air gun's air output is below 30psi if dead-ended.

PTEN: What safety equipment should be used when working with blow guns that use compressed air?

Perry: Workers using compressed air for cleaning should use Safety Air Guns that comply with OSHA as well as wear appropriate eye and ear protection.

PTEN: Where can someone get more information about OSHA rules?

Perry: Our website http://www.guardaircorp.com/guardaircorp/osha_regulations.html or the OSHA website <http://www.osha.gov>. Our website has links to the specific OSHA regs.