

Meeting OSHA Standards

How do Guardair Safety Air Guns meet OSHA Standards when cleaning with compressed air?

Industrial cleaning with compressed air can be extremely dangerous if air guns are misused, or if horseplay in the workplace occurs. Not only can workers be seriously injured from the use of non-compliant air guns but compliance failures can lead to steep fines for violators. Guardair Safety Air Guns incorporate innovative nozzle technology to keep workers safe and comply with OSHA Standards relating to **Output Pressure**, **Chip-Guarding**, and **Noise**.

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 these high pressures to operate effectively. However, OSHA requires that in the event the tip of an air gun is blocked, the static pressure at the point of blockage may not exceed 30 psi.

Guardair Venturi Nozzle

During normal operation, high-pressure, compressed air enters the air gun nozzle joining ambient air drawn in through the dual venturi side ports creating enhanced thrust exiting the nozzle.

In the event the nozzle tip is blocked, 100% of the incoming compressed air is diverted through the dual venturi side ports. By design, the nozzle is engineered to limit static pressure at the point of blockage to less than 30 psi thereby meeting the **OSHA Output Pressure Standard**.

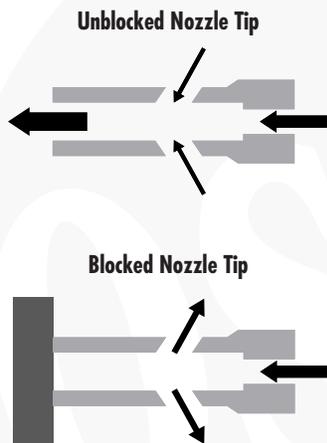
Meets OSHA Standard:

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 cleaning with compressed air in close quarters, workers are often 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 such operations, OSHA requires that "effective chip-guarding" be incorporated into the workplace. Air guns featuring a protective air cone nozzle accomplish this.

Guardair Protective Air Cone Nozzle

During normal operation, high-pressure, compressed air enters the air gun nozzle and a portion is diverted through slots positioned 360 degrees around its periphery, forming a protective air cone. This air cone shields the operator from "chip fly-back" thereby meeting the **OSHA Chip-Guarding Standard**.

In the event the nozzle tip is blocked, a spring mechanism diverts 100% of the incoming compressed air through the slots. By design, the nozzle is engineered to limit static pressure at the point of blockage to less than 30 psi thereby meeting the **OSHA Output Pressure Standard**.

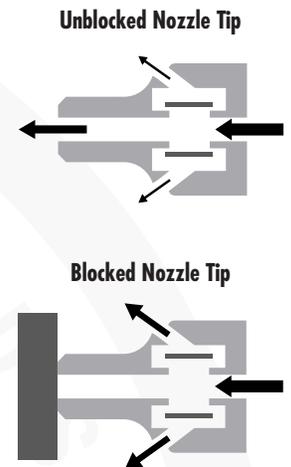
Meets OSHA Standard:

29CFR Part 1910.242 (b)

Hand and portable powered tools and equipment, general.

OSHA Instruction SDT 1-13.1

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3 Noise

To address excessive noise in the workplace OSHA has set permissible daily noise exposure standards. Since air guns can sometimes contribute to high noise levels, air guns incorporating silencer nozzles can be an important component in achieving noise compliance.

Guardair Whisper Jet® Nozzle

High-pressure, compressed air enters the air gun nozzle and is directed through a series of narrow slots positioned 360 degrees around the periphery of the solid conical nozzle tip. The compressed air exiting these slots produces high-speed jets that adhere to the conical nozzle tip and draw in surrounding ambient air. The result is high-thrust at a very low noise level thereby aiding in compliance with the **OSHA Occupational Noise Exposure Standard**.

By design, the solid conical nozzle tip prevents direct blockage of the slots thereby meeting the **OSHA Output Pressure Standard**.

Meets OSHA Standards:

29CFR Part 1910.95 (a)

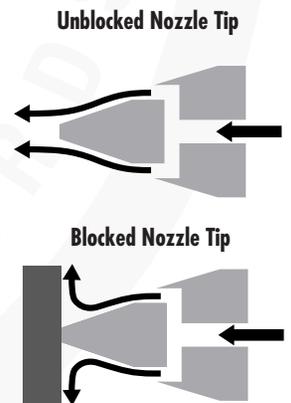
Occupational Noise Exposure

29CFR Part 1910.242 (b)

Hand and portable powered tools and equipment, general.

OSHA Instruction SDT 1-13.1

(OSHA Program Directive #100-1)



Cleaning with Compressed Air

Six Steps to OSHA Compliance for Cleaning with Compressed Air

Follow these easy instructions to identify non-compliant air guns. Take corrective action and replace with OSHA compliant, Guardair Safety Air Guns.

STEP 1 Identify and Remove Non-Compliant Air Guns

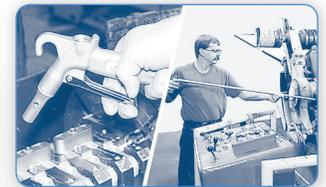
Walk the plant floor and visit workstations where air guns are used. Identify homemade or suspected, non-compliant air guns through visual inspection. Verify non-compliance using the **Pressure Gauge**. Document non-compliant locations on the **OSHA Compliance Worksheet for Cleaning with Compressed Air**. Disconnect and dispose of non-compliant air guns.



Select the proper Guardair Safety Air Gun – Maximize efficiency, provide worker protection, and meet OSHA Standards.

STEP 2 Distance – Close-in or far-away application?

For maximum efficiency choose a safety air gun with a short or no extension for close-in work. Use an extended reach safety air gun for cleaning far-away surfaces.



STEP 3 Thrust – Low or high thrust required to move debris?

Choose a safety air gun that delivers appropriate thrust for the surface to be cleaned; low thrust for light debris; high thrust for heavy or stubborn debris.



STEP 4 Air Supply – Size of compressed air line?

Match the airline at the workstation with the safety air gun. Small diameter air lines (1/4" to 3/8" ID) power low-thrust models; larger diameter air lines (1/2" to 3/4" ID) power high-thrust models.



STEP 5 Ergonomics – “Thumbswitch” or “pistol-grip” style handle?

Thumbswitch style safety air guns are often preferred for applications with overhead air line feeds. Pistol grip style safety air guns are generally preferred for air lines fed from below. Operator preference, including comfort and grip, is key.



STEP 6 Additional Safety Features – Additional operator protection required?

Choose a safety gun with blind-hole capabilities, or chip-fly-back protection where necessary. Choose a silencer nozzle where hearing protection is important.

