

Blowgun in use

### Overview

Interpreting OSHA compressed-air standards can be confusing and lead to frustration.

#### OSHA 26 CFR1910.242(b) states:

“Compressed air shall not be used for cleaning purposes except where reduced to less than 30 PSI and then only with effective chip guarding and personal protective equipment.”

There are two possible ways for blowguns to comply with standard:

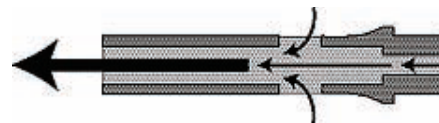
1. Limit the air supplied to the gun by using a regulator that is set to 30 PSI or less, or have a restrictor built into the gun.
2. Provide an alternate path for the air to take out of the gun should it become “dead ended” (where the tip becomes completely blocked).

### Limiting the Air Supply

This approach, while simple to implement, is not efficient. At 30 PSI the air often does not have enough pressure to clean equipment properly.

### Providing an Alternate Path

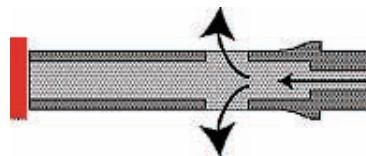
Blowguns that are sold as “OSHA Compliant” typically have a safety tip that provides the alternate path. Manufacturers often call these alternate paths Venturi ports. During normal operation they allow additional air volume to flow through the tip, but if the gun were to be dead-ended (blocked at the tip) the air can flow out through these ports limiting the pressure at the tip to 30 PSI or less. There is also a safety tip design that does not allow the blowgun to become dead ended. The air does not come out of the tip, but instead comes out orifices that are set back and direct the flow down to the tip.



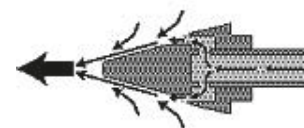
Blowgun tip in normal operation with air entering via Venturi ports



Blowgun tip with solid conical point that cannot be blocked



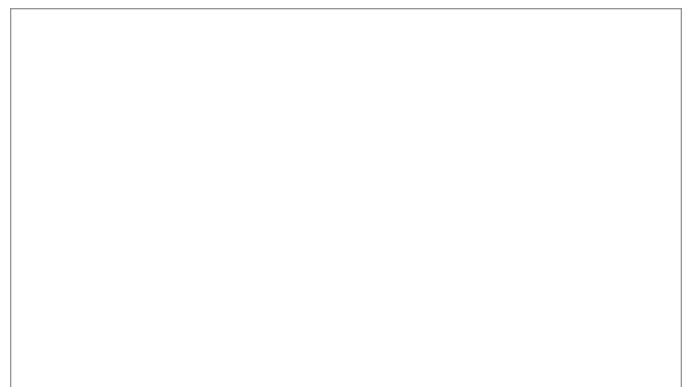
Blocked blowgun tip with air escaping via Venturi ports



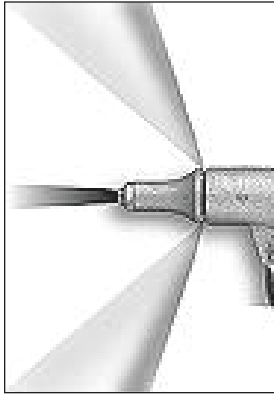
Airflow around conical point

### Maintaining Compliance

A blowgun can only stay in compliance with the OSHA standard as long as it is not tampered with or changed. If the supplied safety tip is removed or non-approved extensions and tips are used, the blowgun is no longer in compliance with the standard.



## Chip Guarding and Personal Protective Equipment (PPE)

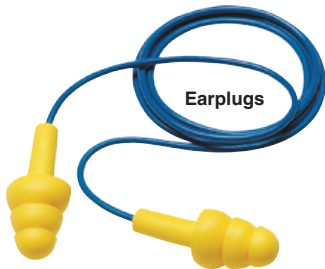


Air cone effect to prevent chips from flying back.

When removing debris with an air gun, 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 requiring close-in work, OSHA requires that effective chip guarding be incorporated into the workplace.

This can be accomplished through protective shields in the work area, wearing protective equipment, or a protective air cone. Depending on the work area, it is not always efficient to have protective shields between the operator and the area to be cleaned. As always, personal protective equipment (PPE) such as safety glasses, gloves, faceshields, protective clothing and respirators should be worn. Some blowguns provide a protective air cone that directs a stream of air away from the worker which deflects any chips that might fly back at the operator. This may also function as the alternate exit path for the air if the tip were to become dead ended. Additional information on safety air guns may be found in the catalog and on the web.

## Noise Exposure



Excessive noise generated in the workplace can be harmful. To address this problem, OSHA has developed permissible daily noise exposure specifications. Since safety air guns often contribute to high levels of occupational noise, the use of low noise, safety air guns can be an important component in noise compliance. Hearing protection should always be worn if the noise exposure exceeds that listed in the OSHA 29 CFR1910.95 Occupational Noise Exposure regulation. See Lawson's Product Information Report – **Hearing Protection** for more information.

## Personal Cleaning



Hand-Held Gun Vac® Kit

Compressed air should **NEVER** be used for personal cleaning, or to clean clothing while it is being worn. The pressure of the air can force debris into the skin causing injury and possible infection. There are special pneumatic hand-held vacuums that can be used to remove dust and chips safely. More information on hand-held gun vacs may be found in the catalog and on the web.

Visit the following websites for additional information:

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

[www.guardaircorp.com/content/oshasafe.html](http://www.guardaircorp.com/content/oshasafe.html)