



CHESS, Inc.
7060 Valley Creek Plaza
Suite 115-108
Woodbury, MN 55125
Phone: 651-481-9787
Fax: 651-415-2886

Complete Health, Environmental, and Safety Services, Inc.
Janet L. Keyes, MS, CIH and Carol A. Keyes, MA, CRC

Blowing It

Compressed air is incredibly useful. Air-powered tools provide more power, cheaper, than electricity. With almost no effort, you can remove dust. And it can provide comfortably cooled air while you paint. Furthermore – it's just air, and everyone needs air, right?

Not so fast. Compressed air harms. The hose can whip around. The force of the air can cause injuries. And the particles that get blown around by the air can be dangerous.

Think that's exaggeration, that the particles can be dangerous? Have you heard of the health problems found in pig slaughterhouse workers in Austin, Minnesota? They used compressed air to blow out pig brains. Remember the anthrax attacks following 9/11? Postal workers used compressed air to clean equipment, and spread anthrax spores around when they did so.

You don't deal with pig brains or anthrax. But what are you blowing around your shop when you blow off dust? Asbestos from brakes? Lead from paint pigments? Asbestos isn't used much anymore (we hope – it is still legal, though), and the amount of lead has decreased. We *think* the pigments used in paints, the materials used in brake pads, and the fibers used in filler are not very toxic. But if you blow them into the air, you're going to breathe them in. What effect will they have long term?

Using compressed air to clean is a bad idea because it puts stuff in the air, where you'll breathe it in. Even if you aren't using it to clean, breathing in that air can be harmful. When you compress air, it can pick up contaminants, including carbon monoxide, odors, moisture, and oils. That's why you can't use it straight from the compressor to your respirator or painting hood. If you want to use it to provide breathing air, it has to be filtered and monitored for carbon monoxide.

The force of the air can be deadly - that's how compressed air usually has killed. There are many (not just one!) reports of injuries when people at work, joking around, blew compressed air at coworkers who were bending over. The air easily went through their clothing. The result: severe damage to the abdomen and lower intestine. While deaths

from that aren't as common as they used to be, we can thank improvements in surgery and medicine, not improvements in compressed air safety.

People have also blown air into their hands, through cuts or when the nozzle slipped and punctured their hands. And compressed air has been blown into the spaces around people's eyes, causing orbital emphysema.

The air hoses are hazards. If a tool comes off, it comes off with force. The hose can whip around violently. And hoses are tripping hazards.

Don't ignore the hazard from noise. We've measured how loud air guns used for cleaning can be, and how loud other air-powered tools are. If someone's using these for a minute or two a day, the sound level is tolerable. But use them for an hour or two each day, and permanent hearing damage is likely.

You're not going to give up your compressor. We understand that. But you can make it safer to use compressed air.

Use safety guns. OSHA requires that your air guns reduce pressure to 30 psi when they are put up against a solid surface (dead-headed). That does not make them less efficient. There are guns that deliver an impressive blast of air and still meet OSHA's standards.

Make sure tools are securely fastened to the air hoses. All couplings need to have safety clips. Don't use a piece of wire or a hose clamp, as they can give way too easily. Check the hose often, to ensure it is in good condition.

Require eye protection every single time compressed air is used. Closely-fitting safety glasses should be the rule in your shop, not the exception.

Increasing the pressure doesn't increase the efficiency. Check the pressure the tool manufacturer recommends. Most say 90 psi. But we keep finding shops that are running their airline pressures 120 psi or more. It isn't true that more is better, but it is true that more is more dangerous.

Don't use it to blow yourself off. Use a vacuum or brush off the dust. If you're so dusty that a vacuum or whisk broom won't work, wear a pair of coveralls.

And never – *never* - aim compressed air at someone else. It isn't a joke.

If you have questions about compressed air safety, workplace safety rules, or other safety issues, contact CHESS at 651-481-9787; toll free at 877-481-9787, or carkey@chess-safety.com.