**Powder-actuated tools**, also called direct fasteners and explosive actuated fastening tools, use a small, controlled explosion to drive a nail, stud, or other specialized fastener into a solid base material such as steel, concrete, or masonry. Direct fastening systems – which include the powder-actuated tool, a magazine, fasteners, and cartridges – are designed for specific applications. Always use a powder-actuated tool with the system components recommended by the tool manufacturer.

**Are powder-actuated tools the same as gas-actuated tools?**

No. Gas-actuated tools, also called fuel-powered tools, are powered by a combustible gas propellant stored in a replaceable canister. Powder-actuated tools rely on a powder propellant charge, similar to one that discharges a blank firearm cartridge.

**What Oregon OSHA rules apply to powder-actuated tools?**

The following Oregon OSHA rules apply to powder-actuated tools:

**Construction**
- 1926.302(e) – Powder-actuated tools
- 437-003-0925 – Powder-actuated tools

**General industry**
- 1910.243(d) – Explosive actuated fastening tools

**Agriculture**
- 437-004-2230(5) – Explosive actuated fastening tools

**Requirements for using powder-actuated tools**

**Training**
- Workers must be trained to operate the tool they intend to use.

**Testing**
- Tools must be tested each day before loading to ensure they are in proper working condition. Use the testing method recommended by the manufacturer.
Powder-actuated tools continued

**Loading and driving fasteners**
- Follow the tool manufacturer’s operating instructions.
- Use only fasteners, power loads, and accessories recommended by the manufacturer.
- Do not point the tool – loaded or unloaded – at anyone.
- Load the tool just before firing it.
- Do not leave loaded tools unattended.
- Do not place the tool where unauthorized people could use it.
- Hold the tool perpendicular to the work surface when fastening.
- If the tool misfires, hold it firmly against the work surface for 30 seconds, then follow the manufacturer’s instructions for misfires.
- Do not drive fasteners closer than:
  - One-half inch from the edge of steel unless the manufacturer approves it.
  - Three inches from the unsupported edge of masonry materials unless the manufacturer approves it.
- Do not drive fasteners into:
  - Very hard or brittle material such as cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick, or hollow tile.
  - Easily penetrated material unless it is backed by another material that will prevent the fasteners from passing completely through the other side.
  - Concrete, unless it is at least three times the penetration depth of the fastener shank.
  - Flaking or brittle material.

**Shields and guards**
- Use tools only with shields, guards, and attachments recommended by the manufacturer.
- Keep hands clear of the open barrel end.

**Personal protective equipment**
- Use eye protection when driving fasteners.
- Use hearing protection when driving fasteners in enclosed areas that can intensify noise levels.
- Ensure that personal protective equipment used with powder-actuated tools meets the requirements in 437-003-0134, Personal Protective Equipment (for construction) or 437-002-0134, Personal Protective Equipment (for general industry).

**Explosive and flammable atmospheres**
- Do not use powder-actuated tools in explosive or flammable atmospheres.

**Defective tools**
- Tools that are not working properly must be immediately removed from service and not used until they are repaired.

**Inspection**
- Inspect the tool daily and before returning it to service to ensure that it is working properly.