

Let's Talk Angle Grinder Safety



What is an angle grinder?

Angle grinders, also called side or disc grinders, are a handheld power tool used for cutting, grinding and polishing. They can be electric, gas powered, or pneumatic and come in a variety of sizes. Consider disc size, arbor size, motor power, power source and rpm in choosing the correct grinder for the job.

How does it work?

An abrasive or cutting disc is mounted at a right angle and rotates rapidly to perform the task. There is an adjustable guard and a side-handle for two-handed operation.

INJURY EXAMPLE:

#1 Bill used a pneumatic sander (rated speed 18,000 rpm), equipped with an 11,000 rpm abrasive wheel to cut a welded bolt as he held it in his hand. The guard was missing. The wheel fractured, and a large piece lodged in Bill's left forearm. Bill was hospitalized for three days and underwent surgery.

1. How could this incident been avoided?

Ensure guard is attached & adjusted to deflect flying particles away from operator; use correct disc - rated tool speed exceeded disc speed; properly secure work piece; appropriate PPE & use two hands.

2. What hazards can be associated with angle grinders? High speed flying particles, inhaling dust or fumes, kickback, fires & explosions, electrical shock, cuts & abrasions, noise, Musculoskeletal disorders (MSDs) -repetitive motion & awkward work positions.

Angle Grinder Use

Angle grinders generate sparks. When required obtain a hot work permit before use. Keep work area clear of debris and flammable materials. **Do NOT** use in areas where there is grain dust or other combustible dust accumulation.

- ✓ Use the correct wheel for the machine's size and speed, and the work to be performed.
 - A cutting disc should not be used for grinding.
- ✓ The RPM rating of the disc/blade must be higher than that of the angle grinder.
- ✓ Adjust guards to deflect flying particles away from operator.
 - Use an 180° guard between operator & wheel.
- ✓ Before use inspect wheels for cracks, defects and wear. **Replace worn discs.**
 - Perform "ring test" as appropriate.
- ✓ Allow grinder to come to full speed and warm up before use and to a complete stop after use.
- ✓ Do not grind on the side of the wheel.
- ✓ Do not use liquid coolants.
- ✓ Always use two hands. Keep hands away from rotating wheel and avoid continuous vibration.
- ✓ Wear proper PPE including eye & hearing protection; leather gloves; natural fiber clothing; apron and respiratory protection as needed.
- ✓ DO NOT wear loose fitting clothing or have hanging strings.
- ✓ Maintain good footing, balance & work position.
- ✓ Do not carry grinder with finger on the switch.

Let's Talk about Our Worksite

1. Where should angle grinders NOT be used?
2. What can we do at this workplace to ensure we use angle grinders safely?
3. Have we properly inspected tools and wheels? Have we taken out of service defective wheels & broken tools – including those with frayed or damaged electrical cords?



Grain Handling Safety Coalition

Angle Grinder Safety

Protect against hazards



- Guard
- Proper PPE
- Correct Use

