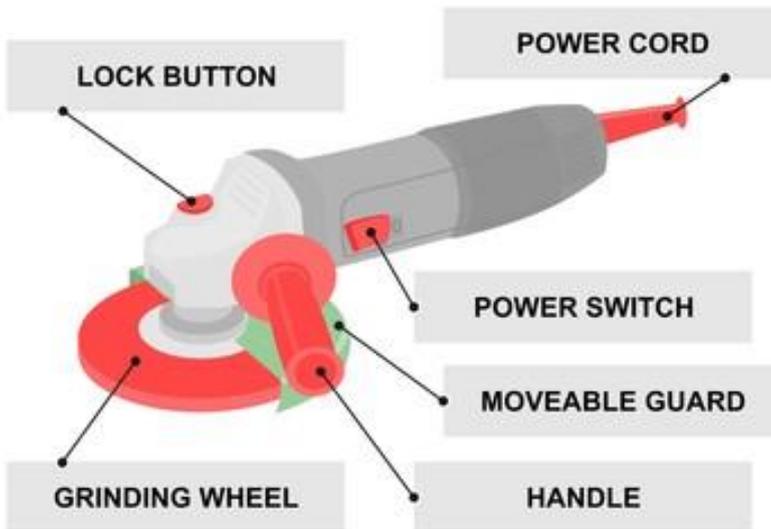


Angle Grinder Machines safety instruction notes

Angle grinders are portable, handheld machines used for grinding and cutting of ferrous metals and stone/masonry products. There are two common sizes in general use – 115mm (4 ¾ “) & 230mm (9 ½ “) wheel diameter. The larger machine has a significantly more powerful motor. As with any kind of machinery, you should always read the instructions before use and follow safety rules to prevent injury.

1. Describe structure of Angle Grinders



- a. Has a removable abrasive disc.
- b. Motor mounted in the main body
- c. The machines are equipped with an adjustable guard
- d. These machine are intended grinding/cutting of ferrous metals or stone/masonry products only. Copper, brass aluminium, wood, plastic, etc must not be applied to these machines.
- e. A removable side handle is provided and can be fitted in several positions.
- f. Most machine have a spindle lock button to assist when changing the disc

2. PPE and extraction.

- a. No loose clothing
- b. Safety glasses or visor at all times
- c. No Gloves
- d. Face mask if cutting/grinding masonry products

3. Adjustments

It is unlikely that these machines will be prepared for use by workshop cleaning/maintenance team due to the variable nature of its uses. It is, therefore, essential that the user is confident in its use and completes the following check prior to use.

- a. Check that there is no damage to the disc surface – Cracks/chips
- b. Ensure it is the correct disc for the intended operation. Note – cutting discs should not be used for grinding & vice versa. Equally, masonry disc must not be use on metal nor metal disc on masonry.
- c. The adjustable guard should be positioned to deflect any spars/particles away from the user.
- d. The handle should be positioned to give maximum, two handed, control of the machine at all times

4. Potential hazards

- a. Disc explosions that can cause blindness and lacerations
- b. sparks and heat hazards that can cause abrasions and burns
- c. flying particles that can cause impact injuries
- d. dust that can cause respiratory distress
- e. lack of control of the machine resulting in contact of the rotating disc with the body.

5. Safety precautions

- a. Familiarise yourself with the controls/switches and practice operating them with the machine unplugged.
- b. Ensure the work piece is securely fixed or sufficiently heavy to prevent movement while cutting/grinding
- c. Only trained personnel should use angle grinders.
- d. Inspect the grinder and all attachments before each use. Safety shields and handles must be in place, adjusted properly and secured before using the grinder.
- e. Ensure the disc that has been selected is appropriate for the task. Do not grind material for which the disc was not designed. Do not use a wheel that has been dropped, even if it appears undamaged. It could potentially be weakened or unbalanced enough to cause it to disintegrate when used.
- f. Ensure the disc is the appropriate size for the machine being used.
- g. Establish a work zone such that sparks/particles that are expelled from the machine will have no contact with the operator or other personnel.
- h. Ensure the disc is correctly fitted and the spindle nut fully tightened.
- i. Keep work piece clear of the wheel, start the machine and LISTEN. Rumbling, whining or vibration indicates a problem.
- j. As with all handheld machines, check the integrity of the power cord especially at the ends where it enters the plug or the machine.

Now we're ready to start Grinding/cutting

6. Follow basic safety rules

- a. Wear PPE that provides the best protection for the task. Always wear approved safety glasses or goggles when using a bench or pedestal grinder. Face protection is highly recommended to protect against flying debris. Evaluate the task and work environment to determine if additional PPE is required like hearing protection or respiratory protection.
- b. Don't wear loose clothing or jewellery and make sure long hair is secured.
- c. As a precaution, in case of accidental disc breakage, hold the machine to one side, not directly in line with the body, as the grinder starts up and begins to reach maximum operating speed. Allow the grinder to come up to full operating speed before applying the disc to the work piece. Bring the disc into contact with the work slowly and smoothly, applying gradual pressure to allow the wheel to warm up evenly.
- d. Ensure the grinder operates smoothly and is not vibrating. If there are unusual noises or vibrations, turn off the grinder and conduct an inspection to fix the issue before work resumes.
- e. **Only use the designated face of the disc for grinding operations, this should be clearly marked on the disc label.**
- f. Do not walk away from a grinder that is still in motion. Turn off the grinder when the task is completed and wait until the wheel comes to a complete stop.
- g. Never stick an object into the wheel to attempt to stop the grinder more quickly.