

Angle Grinders

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Angle grinders are used in many trades for tasks such as cutting, grinding off metal and cleaning welds. However, they can cause serious injury and their use requires care and consideration.



Introduction

Before using an angle grinder, a number of questions should be considered, including:

- Is the employee trained in the correct use of angle grinders?
- Is the correct size of grinder being used?
- Is the correct disc being used? Different discs are needed for cutting and grinding. Oversize discs run faster, presenting an increased risk of the disc bursting
- Is the work piece suitably supported before work commences?
- Is the correct guard fitted? Guards should never be removed when the tool is in use. Unguarded discs present an increased risk of injury to the user



Equipment

Angle grinders are one of the most common hand tools in use, and proper selection and maintenance is necessary to make sure all equipment is suitable and in good working order.

Selection

A wide range of angle grinders are commercially available, before purchase and use, advice should be sought from the supplier about the most suitable tool for the task. As a minimum, all equipment should conform to the appropriate British Standard and carry the required CE marking.

Maintenance

Angle grinders should be subject to regular inspection and maintenance, including routine portable appliance testing:

	110-volt equipment	240-volt equipment
User safety check	Weekly	Daily
Formal visual inspection	Monthly	Weekly
Inspection and test	3-Monthly	Monthly

Employees

Angle grinders frequently cause accidents, some involving serious injury to the user. The correct training and equipment can prevent injury and ill health to employees.

Training

Angle grinders may seem to be a simple piece of equipment. However, all employees should receive training in their safe and correct use, including:

- Pre-use inspections to ensure equipment is in good order, electrically safe and fitted with appropriate guards
- Determining whether the disc is in good order or needs replacing
- Identifying discs and selecting the correct one for the task
- Fitting a disc correctly
- The correct method of use for an angle grinder
- Selection of the appropriate Personal Protective Equipment (PPE)
- Adopting a suitable, safe stance
- Specific precautions to be observed for cutting jobs

Personal Protective Equipment

Appropriate PPE should always be provided for employees who use angle grinders. This should include:

- Eye protection (ideally goggles)
- Safety footwear with steel toecaps
- Gloves
- Overalls
- Full-face visor if work is taking place above head height

Health Risks

In addition to the risk of injury arising from an accident, angle grinders can pose other risks to the health of employees. These could include:

- Vibration – when there is extended use
- Exposure to nuisance dusts
- Exposure to silica – if an angle grinder is used to cut concrete products

Use of Heat

Angle grinding operations will often result in the generation of significant heat and sparks. This can create a risk of fire or explosion, especially if carried out in close proximity to flammable or combustible substances or atmospheres. To prevent serious injury or damage to property, suitable and sufficient hot work procedures must be put in place and upheld. Further advice is available in the Aviva Loss Prevention Standard *Hot Work Operations*.

Summary

- Ensure all angle grinders provided are suitable for the tasks to be carried out
- Arrange for regular maintenance and inspection of equipment
- Carry out risk assessments of all tasks involving angle grinders
- Train employees in the correct use of angle grinders, and ensure only trained individuals use angle grinders or change discs
- Issue the correct PPE to all employees who use angle grinders

Checklist

A generic Angle Grinders checklist in Appendix 1 which you can tailor to your own organisation.

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Sources and Useful Links

- [INDG236 – Maintaining portable electrical equipment in low-risk environments](#) – Health and Safety Executive
- [HSG17 – Safety in the use of abrasive wheels](#) – Health and Safety Executive
- [Health and Safety Executive \(HSE\)](#)
- [The Management of Health and Safety at Work Regulations 1999](#)
- [The Provision and Use of Work Equipment Regulations 1998](#)
- [The Electricity at Work Regulations 1989](#)
- [The Personal Protective Equipment at Work Regulations 1992](#)
- [The Control of Noise at Work Regulations 2005](#)

Additional Information

Relevant Aviva Loss Prevention Standards include:

- CE Marking for the Manufacturing Industry
- Hot Work Operations
- Permit to Work Systems

To find out more, please visit [Aviva Risk Management Solutions](#) or speak to one of our advisors.

Email us at riskadvice@aviva.com or call 0345 366 6666*

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Appendix 1 – Angle Grinders Checklist



Location	
Date	
Completed by (name and signature)	

	Angle Grinders Checklist	Y/N	Comments
1.	Is an angle grinder the correct piece of equipment for the task?		
2.	Is the correct disc fitted for the task?		
3.	Is the correct guard fitted for the job?		
4.	Is the guard burst proof?		
5.	Is the employee trained in the correct use of angle grinders?		
6.	Is Local Exhaust Ventilation (LEV) or bench extraction needed?		
7.	Are risk assessments in place for different usages of the angle grinder?		
8.	Are all the inspections on the angle grinder up to date?		
9.	Does the employee have all relevant PPE?		
10.	Has the vibration risk been assessed?		
11.	Additional comments:		

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