

SAFETY AND HYGIENE REGULATIONS



Servei de Prevenció de Riscos Laborals
UNIVERSITAT POLITÈCNICA DE CATALUNYA

ANGLE GRINDERS

CODE

SHR 208

Date:

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DESCRIPTION OF AN ANGLE GRINDER

An angle grinder is an item of work equipment that is generally used to remove or finish weld seams, polish (deburr) surfaces and edges, cut metal and perform other similar activities. There are two types: **mini-angle grinders and angle grinders**.

These tools should include:

- Electronic devices for manual, voluntary operation.
- Electronic anti-jamming devices for the disc.
- Protection against buckling of the casing.
- Devices that limit the starting current.
- Protection against the device restarting after a power failure.
- An additional handle to dampen vibrations, which can be positioned to work with either hand.



The main hazards are:

- Cuts and contact with moving elements of the machine
- Knocking into objects or tools
- Projection of fragments or particles
- Overexertion
- Exposure to dust
- Exposure to noise and vibration
- Contact with heat



PERSONAL PROTECTION EQUIPMENT (PPE) TO USE

- **Safety goggles or shields:** to protect your eyes from projections of material or fragments of the tool if it breaks.
- **Hearing protectors:** depending on the material of the workpiece, high levels of noise could be reached. In these conditions, you should use a hearing protector.
- **Safety gloves:** during use of the angle grinder and when you change the disc (the tool can get hot if used for prolonged periods).
- **Respiratory protection equipment:** if you are working on materials that could produce dust that is harmful to health or when many particles are generated.
- **Protective clothing:** depending on the material that is worked on, use a leather apron to protect yourself from fragments that might be projected from the tool or the workpiece. Wear well-fitting clothing with the sleeves tightly fitting at the wrists to prevent them from getting caught in the tool. If you have long hair, tie it back. Do not wear jewellery.



Protecció obligatoria de la vista



Protecció obligatoria de les mans



Protecció obligatoria de l'oïda



Protecció obligatoria per a les vies respiratòries

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BEFORE USING AN ANGLE GRINDER

- ✓ Consult the manufacturer's manual to review safety instructions and determine which accessories are required depending on the operation that you are going to perform.
- ✓ For long tasks or for cutting stone, **connect the machine to a suitable external extraction system.**
- ✓ Check whether there are any electricity cables, gas or water pipes in the walls, ceiling or floor that is going to be perforated.
- ✓ Check whether there are any inflammable powders or vapours in the workplace, as the machine could generate sparks.
- ✓ Secure moving workpieces with clamps or similar tools.
- ✓ **Position the additional handle**, and the hand guard if applicable, **in a suitable position.**
- ✓ Select and **assemble the corresponding protective casing.** Position it according to the operation and adjust it so that it holds back any projections.
- ✓ Check that the tool is suitable for the task and in good condition. **Remove any tools for adjusting the tool or keys before connecting the equipment.** Check that no tools are touching the casing.
- ✓ Connect the machine to an electricity network that is protected with a thermomagnetic circuit breaker.
- ✓ Before you plug in the machine, check that it is in the off position and that there is **nobody in the radius that could be affected by any particles that may be projected.**



WHILE USING AN ANGLE GRINDER

- ✓ Operate the angle grinder at maximum speed applying it to the workpiece for a minute.
- ✓ Work on a firm surface, adopt a stable posture and hold and guide the machine **with two hands.**
- ✓ Avoid adopting an awkward posture or overexerting yourself during work.
- ✓ Always **keep your hands away from the machine's work area.**
- ✓ Do not stand in front of or behind the cutting disc in the same line as the cutting path.
- ✓ When the tool gets jammed, disconnect it from the power supply and free the tool when it has completely stopped moving.
- ✓ Do not use saw blades for wood or other tools with teeth.
- ✓ Do not use the faces of the cutting discs for polishing as they could break.
- ✓ Do not apply excessive force with metal brushes, as metal splinters could fly off.
- ✓ Always keep the **electric cable behind the device.**
- ✓ Do not expose the machine to water and prevent liquids from getting inside it.
- ✓ When you finish the work and before you put down the angle grinder, **wait for the tool to stop, without using your hand to slow it down**, and then disconnect the device from the electricity supply.

