

MILLING MACHINES AND CNC MILLS: Safety Precautions

Milling machines and computer-numerical-controlled (CNC) mills use moving cutters and/or move stock materials to cut shapes in materials such as metal, wood or plastic. Follow safety precautions when using milling and CNC machines.

HAZARDS

Milling and CNC machines cut away material using rotating blades, which can throw or eject dust and chips at high speed.

- Flying chips present an **eye injury** hazard.
- Fine dust can be a **respiratory hazard**.
- Mills can also be very **loud**, which can impact hearing as well as drown out voices and alarms.

Rotating machinery presents a serious hazard, as gloves, clothing, jewelry or loose hair can be caught and body parts drawn into the running machine. Mills have guards to prevent some exposure; some are completely enclosed when running.



SAFETY PRECAUTIONS

- Users must be trained on the operation of the specific mill they are going to use.
- Never work alone, never leave the milling machine unattended while running, and know where the emergency stop controls are located.

- Securely clamp the stock material in place.
- Secure guards, shields, doors in place prior to starting.
- Keep hands, tools, and clothing at least 12 inches away from the moving mill and do not attempt to adjust the mill while operating.
- Wear safety glasses or goggles, and hearing protection if needed. Do not wear gloves near operating equipment.
- Keep the mill surfaces and shop floor clean of cuttings and dust. Metal filings can combust spontaneously and require a Class D fire extinguisher.

Machinery must be completely disconnected from power (and de-energized) if it is to be repaired or adjusted (refer to the [Hazardous Energy Control](#) page on the EH&S website for more information).

Training and PPE

- All users must be properly trained on the potential hazards, lab or shop and manufacturer's operating procedures, use of personal protective equipment (PPE), emergency procedures, and safety precautions for operation.
- Fire Extinguisher Training as needed (available on the [EH&S website](#)).
- Required PPE: Safety glasses to protect eyes from particles and debris, hearing protection (if necessary) and other PPE as needed.

RESOURCES

- [Metalworking Machines -- Milling Machines FAQs](#) - Canadian Centre for Occupational Health and Safety

Contact EH&S at (206) 543.7388. or ehsshop@uw.edu for more information.