

Vertical drill presses and machine vices

Background

Vertical drill presses, sometimes referred to as pedestal drills, are designed with a slotted work-table and base. This enables work pieces to be secured prior to drilling using a variety of clamping devices depending on the size and shape of the material being used.

If unsecured, the clamping device or material can move during use causing injury to the operator. This can occur if a drill bit breaks or jams, resulting in sudden, uneven forces being applied to the material and the clamping device.



What are the identified issues?

- Securing the work piece adequately for the drilling process.
- Appropriate attachment of the clamping device to the drill press work-table
- Ensuring the correct process for drilling e.g. for drilling steel using correct chuck speed and drilling process for the size of the drill.

What are schools to do?

- Review all drill press machines in your school.
- Ensure that appropriate clamping devices are available in good working order.
- Ensure all clamping devices have robust securing fasteners that can hold the device firmly during drilling processes.
- Establish a process to ensure all clamping devices are correctly secured prior to each drilling task.
- Ensure the drill press safe operating procedure (SOP) is current and accessible
 - review the SOP to ensure it applies to your drill presses; amend as relevant
 - add relevant wording in the 'Pre-operational Safety Checks' section: e.g.
 - check that the clamping device to be used is in good working condition and is appropriate for the material being drilled
 - ensure all clamping devices are secured prior to commencing each task.
- Ensure all staff and students using drill press machines are fully aware of any changes to clamping devices and requirements around securing work pieces prior to drilling.
- Establish a local process to ensure drill press clamping devices and equipment are regularly inspected by staff to ensure that appropriate clamping equipment is available for the type of work-piece being secured.

Drill press SOP: <https://education.qld.gov.au/initiativesstrategies/Documents/sop-drill-press.DOCX>