

Safety Sheet 10 – Drill Presses

Consult the *Ontario Occupational Health and Safety Act and Regulations 851*, as well as the relevant *CSA Standard* for detailed information on drill presses.

A **drill press** is a powered vertical drilling machine in which the drill is pressed to the work automatically or by a hand lever.

A **competent person** is defined by the Ontario Occupational Health & Safety Act as a person who (i) is qualified because of knowledge, training and experience to organize the work and its performance; (ii) is familiar with this Act and the regulations that apply to the work and (iii) has knowledge of any potential or actual danger to health & safety in the workplace.

Drill Presses can be dangerous if not used with caution. In order to familiarize yourself with your respective drill press, be sure to read the owner's manual carefully, ensure that you understand the instructions / directions and that you are properly trained before operating any machinery. Some of the hazards associated with drill presses are:

- *Mechanical* – injuries can include cuts, abrasions, broken bones etc., stemming from inadequate guarding, poor work practices, etc.
- *Ergonomic* – [muscular-skeletal disorders](#), backaches, which can all be caused by handling bulky materials and poor working arrangements (e.g. lack of anti-fatigue mats, poor grouping of workstation).
- *Heat* – most likely injury suffered would be burns due to handling of hot material or heat stress from prolonged use.
- *Physical* – hearing loss (wear the appropriate personal protective equipment).
- *Electrical* – electrocution; ensure that equipment is properly grounded.

Prior to starting the drill:

- Ensure that guards are in place, in good working condition and correctly adjusted. Conduct a pre-start check and document your findings (name, date, equipment condition, signature, supervisor's signature etc.).
- Ensure that your work area is kept clean of debris, slip, trip and fall hazards.
- Ensure that all stationary equipment is anchored securely to the floor / table top.
- Ensure all machines have a(n) start/stop/emergency stop button within easy reach of the operator.
- Each machine shall have only one operator at any given time; however, in the event of an emergency, all workers should know how to stop the machine
- Ensure that keys and adjusting wrenches have been removed from the machine before turning on the power

Safety Considerations:

- Always wear the appropriate personal protective equipment required for the specific task (safety glasses, face shield, hearing protection etc.).
- Using a vacuum or wire brush, remove excess metal shavings, burrs, chips and other debris; when drilling deep holes, be sure to clean out the hole frequently.
- While drilling, use vise grip(s) or a clamp to prevent the object from spinning and / or moving.
- When drilling metal, be sure to lubricate the drill bit regularly.
- Dull drills bits are a common cause of malfunction and breakage. Clean and sharp drill bits will prevent operators from placing unnecessary stress on the drill press and will increase efficiency of the drill press.
- When the drill begins to break through the object, reduce pressure on the drill; by doing this it prevents the drill from pulling into the object and cracking / breaking.

When operating a drill press, *DO NOT*:

- Do not wear any loose clothing or ties; roll-up your sleeves (if applicable) above the elbow to prevent them from being caught in revolving parts.
- Do not use your hand to clean metal shavings, burrs or other debris.
- Do not have unconfined hair near the equipment (long hair can be controlled by cutting it or tying it back).
- Do not wear jewelry (this includes rings, watches, chains, necklaces, earrings or bracelets) while working with a drill press.
- Do not set speeds, adjust, or measure work until the drill press has completely stopped.
- Do not hold work by hand.
- Do not place hands under the stock being drilled.
- Do not stop rotation of chuck and spindle with your hand.
- Do not remove a broken drill bit with a centre punch and hammer.
- Do not leave the drill press running unattended.