

Shop Supervisor: \_\_\_\_\_

Date Approved: \_\_\_\_\_

## Drill Press

A **drill press** is a versatile tool that can be used to drill holes into a variety of materials, and is one of the best tools for repetitive, precise drilling needs. These tools are available in several different types and are suited for specific tasks.



Personal Protective Equipment					
					
<b>Tie Back Hair &amp; Secure Loose Items</b>	<b>Closed Toe Shoes</b>	<b>Eye/Face Protection</b>	<b>Hearing Protection</b>	<b>Protective Clothing</b>	<b>No Gloves Advised</b>
Tie back long hair and secure loose clothing that could get caught in rotating parts. Remove rings and other jewelry.	Appropriate enclosed footwear should be worn.	Wear ANSI Z87.1-compliant safety goggles to protect eyes. Face shields may be necessary to protect from dust, shards, and debris.	Hearing protection should be worn when noise levels are excessive.	Close-fitting or protective clothing, such as an apron, is encouraged.	Gloves can get caught in rotating parts. Follow the "4 inch" rule to keep hands away from harm.

## Potential Hazards

Be aware of the following potential hazards when working with drill presses:

- **Mechanical:** points of operation, pinch points, shear points, power transmission points
- **Operational:** heat, metal chips/shards, noise, unstable loads/stocks
- **Chemical:** coolants, cleaning solvents, lubricants
- **Electrical/Energy Sources:** exposed wiring, malfunctioning equipment, unexpected start up/shut down

## Before Use

- Know the location of start and stop switches or buttons, and keep the drill press table free of tools and other materials.
- Use only properly sharpened drill bits, sockets, and chucks in good condition. Remove dull drill bits, battered tangs, or sockets from service.
- Report any unsafe conditions observed on the drill press or stock being worked on to the shop supervisor.

- Do not remove metal or wood chips from the table or stock by hand; use brushes to properly remove chips. **These items may be very hot after being drilled.**
- Check the [Safety Data Sheet](#) for potential health hazards of specific materials (e.g., western red cedar, beryllium, chromium) and chemicals (e.g., lubricants, solvents).
- Ensure that machine guards are in place and recommended personal protective equipment is worn.
  - All belts and pulleys must be guarded; if frayed belts or pulleys are observed, the drill press must be taken out of service and the belts or pulleys must be replaced.
  - If adjustments or maintenance (such as adding oil) are needed, unplug the power (or lockout/tagout if hard-wired) before adjusting.
- All stock must be properly secured with a vise or clamps prior to a machining process.
- Do not insert a drill chuck key into the chuck until the power is shut off and the machine has come to a complete stop.

### During Use

- **Concentrate on the task at hand; avoid distractions.** Most injuries occur when the operator is not paying full attention to what they are doing.
- If the stock slips in the vise or clamp, the operator must not attempt to hold the work with their hands or try to tighten the vise/clamp while the machine is in motion. Shut down the power to the machine prior to re-tightening the loose stock.
- Use the correct speed and drill for the type of stock being machined.
- Use the appropriate bit for the stock being machined. Bits with feed screw or extremely long bits should not be used.
- The drill bit should be mounted the full depth and in the center of the chuck.
- Position the table and adjust the feed stroke eliminating the possibility of the bit striking the table.
- Feed the bit smoothly into the work. If the hole being drilled is deep, withdraw the bit frequently to remove shaving on the bit.
- Never attempt to remove a broken drill with a center punch or hammer.
- Be cautious when a drilling operation requires locating fingers close to the bit. It is a best practice to keep hands at least 4 inches away from the drill bit.

### After Use

- Shut off the power and/or unplug the machine and ensure that it is ready for the next person to use. Wait for the drill bit to stop spinning on its own- do not attempt to use your hands to stop it from spinning.
- Sweep or use a shop vacuum to collect any debris that resulted from drilling on the floor or other surfaces. Avoid cleaning with compressed air to prevent injury.
- Store stock materials in a neat and secured manner; do not accumulate excess combustibles. Keep aisles and exits clear.
- Wash hands and exposed skin thoroughly after completing work and before leaving the shop area.

### Emergency Equipment and Procedures



- Report all incidents to the shop supervisor, including injuries, equipment damage, and near misses.
- Know the location of the nearest emergency equipment and items, such as the emergency stop/shut-off for the specific machine, eye wash, first aid kit, fire extinguishers, fire alarm pull stations, and emergency exits.

