



Drill Press Safety Rules

The drill press is a machine that allows the user to control the position and depth of the drilling operation precisely. Because the drill chuck travels straight down relative to the column the table is mounted to, holes can be drilled vertically down into the material that's mounted to the table. If the table is set at an angle to the drill press column, then holes can be drilled into the stock at a predetermined angle set by the user.

When using the drill press, follow these rules and guidelines.

Start with a Risk Assessment to ensure a safe work area:

1. Follow all procedures in **CHARLOTTE WOODWORKERS' ASSOCIATION Shop Rules and Guidelines**.
2. Always wear safety glasses with side shields or goggles upon entering shop situations and while operating the drill press.
3. If you don't know how to use the drill press properly, get instruction on how to use it correctly for what you want to do.
4. The drill press turns the chuck and any installed bit or other accessory with substantial rotational power. If anything becomes caught in these rotating parts, the drill press will wrap it up until the motor stops or the caught item breaks free. If the item that becomes entangled is attached to any part of a person's body, it will be pulled into the machine. Most such body parts are weak compared to the rotational power of the drill press and the potential injury will likely be severe. Don't let this happen to you or to a bystander!

5. Remove watches, rings, and neckties before operating the drill press.
6. Remove jackets and roll up long sleeves before operating the drill press.
7. Secure long hair to reduce the chance that it could become tangled in the rotating parts.
8. Do not wear any type of glove while operating the drill press. If you were wearing a glove and it became entangled in any rotating part of the drill press or drill bit, your hand could be pulled into the machine with injury likely to follow.
9. Ensure that you have a proper backer board between the drill press table and your work.

Operational Safety Rules:

1. Approach your work on the Drill Press with a safe attitude!
2. The CWA drill press is for drilling wood (solid wood, plywood, Medium Density Fiberboard, etc). **The CWA drill press is NOT for drilling metal.**
3. **The use of Fly Cutters is NOT recommended on any CWA drill press.**
4. Check the machine over carefully to determine its condition before using it. Someone could have left it broken or out of adjustment.
5. Stand balanced and do not lean too close to the drill press or you may catch your clothes or hair in the rotating parts.

6. Make sure that bystanders are well away from the rotating parts of the drill press.
7. Be certain that table and drill press head are both secure.
8. Be sure that the chuck arbor shank, or the tapered shank of a taper shank drill bit, if using one of those, is firmly seated in the drill spindle. A falling drill bit or chuck may cause injury.
9. **Never leave a chuck key in the chuck socket.** If the power is turned on, the key will be thrown out and may injure someone.
10. Secure all work with a vise, C-clamp, or V -block whenever possible. Always clamp work securely. Never try to hold work in your hands while drilling. The drill may catch, jerking the work out of your hands and you may be stuck by the flying piece.
11. Operate feed handle to ensure that the drill cuts evenly into the work. Be sure the drill does not pass through stock into the vise or drill press table.
12. Select the proper drill bit and **make certain that it is sharp.**
13. Preset depth of cut adjustments before turning on the power.
14. **Adjust the drill press to the correct speed.** A drill turning too fast may break and flying pieces may strike you or other people working in the shop. For safer drilling, use slower speeds for larger diameter holes and faster speeds for smaller diameter holes.
15. Never try to STOP a revolving piece of work that is caught in the drill by grabbing it. Remain calm and shut off the machine.
16. Ease the pressure on the feed as the drill breaks through the under-side of the work being drilled. This will keep the drill from breaking or the work from being jerked out of the vise. When the hole is drilled, back out of the cut and stop the machine.
17. **Always use a brush to remove chips or shavings** and keep the floor area around the drill press clean. If using a drill press that has been used for drilling metal, never try to remove loose metal shavings with your hand as you could be injured. **Don't use compressed air to clean waste from the machine** as it can throw chips, shavings and dust in every direction. This is dangerous to you and to others in the area.
18. Never touch the rotating chuck or drill as this may cause a serious injury.
19. When finished with the drill press, return it to a clean and normal setup. Remove bits and fixtures and store them properly. Clean shavings and accumulated dust from the drill press and dispose of them properly.
20. **Don't drill metal on the CWA drill press.** Only wood will be permitted on the Association's drill press.
21. Use a backer board between the drill press table and the workpiece. This helps prevent damage to the drill press table and in many cases can result in a cleaner cut when the bit exits the bottom of the workpiece. When possible, ensure that the hole in the drill press table is aligned with the drill bit's travel. This also helps ensure that the table and bit won't be damaged.
22. **If you feel that the operation that you need to perform doesn't comply with these rules and guidelines, contact the shop foreman to get skilled**

- assistance.** There may very well be an alternative way of producing the desired end result in a safe fashion.
23. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.

Operational Safety Rules – Fly Cutter (Adjustable Circle Cutter)

**Based on the Popular Woodworking Editor's Blog post:
Taming the Circle Cutter – the Tool I Love to Hate**
Categories: Editors' Blog • Feature Articles • Techniques • Woodworking Blogs
Robert W. Lang | March 13, 2013

1. Sharpen the cutter – these come with a decent grind, but a few strokes on the sharpening stones give a cleaner cut with less resistance.
2. Make sure that all of the Allen screws are really, really tight.
3. Double-check that ALL of the Allen screws are really, really tight – one of the bad things about this tool is that everything is adjustable. If one of those screws comes loose while the tool is spinning around, parts can go flying, which is **VERY dangerous**.
4. Run the drill press at the slowest possible speed. If the drill press can be set to 250 rpm, that would be about right. Otherwise you have to go with the slowest speed available, and if that doesn't seem slow, ask the Shop Foreman for guidance in setting up an alternate drill press that will run at a slower speed.
5. Use of a Face shield would be a wise choice, and wear it over your safety glasses. Muff style ear protectors can also offer better protection than simple ear plugs.
6. Keep bystanders well away from the operation. The farther away they are, the better. If you're going to use this tool, using it when there are a minimal number of people in the shop is the best option.
7. Clamp the work securely to the drill press table and don't get your hands anywhere near the fly cutter when it's running. If something goes wrong, turn off the machine and duck under the table until the spinning stops.
8. Feed the cutter into the work as slowly and gently as you can.
9. As soon as you've finished the cut, shut the machine off.