

Drill Press Competencies

I. Competencies

Given a properly adjusted drill press, accessories, instruction and demonstration of use, each student will be able to:

- A. Pass a written test on safety and operating procedures of the drill press with 100 percent accuracy.
- B. Demonstrate ability to use the drill press, following suggested safety rules and correct operation procedures.

Instructional Materials and Procedures



Drill Press Safety

1. Do not wear loose clothing or jewelry while operating a drill press. Confine long hair with a cap or hair tie. Wear industrial quality eye protection while drilling. Never allow any part of your body to touch the drill bit or any revolving part of the drill press while it is in motion.

2. Keep the work space and drill press table clear of all unnecessary material or tools. Tighten the drill press table with the locking clamp so the hole in the table aligns with the drill bit. Keep the floor and table surface free from wood chips and sawdust.
3. Have power off before making adjustments.
4. Drill only with sharp drill bits.
5. Secure bit by tightening in each hole of the drill chuck. **Remove the chuck key** before the drill press is turned on.
6. Make sure the motor guard cover is in the closed position, so belts and pulleys are not exposed.
7. Secure all work in a drill press vise or with a clamp before drilling. Never hold material by hand while drilling.
8. **Never attempt to stop a revolving piece of work in the drill press by hand.** If the material begins to rotate, turn off the drill press, wait for the objects to stop revolving and then remove it
9. Adjust drill speed and feed to the type and size of hole being drilled. Select proper sized bit by using drill bit gauge. Make sure the drill bet is sharp.
10. Place a block of wood under the material being drilled to prevent the bit from cutting into the vise/table top after coming through the work. This will also help prevent tear-out on your wood.
11. Set the drill speed to match the hole size. Note that **variable speed drill presses require the machine to be running to adjust the operating speed.**
12. Apply pressure to pilot feed lever, feed drill bit into the material fast enough to keep drill bit cutting at all times. Do not try to drill too fast, allow the bit to cut the material.
13. After the hole is drilled release the pilot feed lever slowly and allow the chuck to return to the starting position. Turn off power.
14. If a bit seizes, or gets stuck in your material, it may break the bit, cause the vise to rotate, or cause the bit to spin in the chuck. If this occurs turn off the drill press, wait for it to stop turning, then free your material.
15. Remove drill bit, clean, and return it to proper storage place.
16. When drilling long stock; put work on the drill press table, **long end to the left of the drill press operator.** Lower the drill bit to the work and align the center mark, of the hole to be drilled, with the drill bit. Then tighten the quill lock and clamp the material to the table using a clamp. Use a support to hold up the unclamped end of the stock. Release the quill lock and drill the hole.
17. When drilling round stock; use a V-shaped drill block to support and hold the material. After the material is centered and aligned with the drill bit, clamp the stock to the drill press table using clamp, then drill the hole.