

# Drill Press Tutorial

**Operation:** The drill press is only used for drilling, boring, and countersinking.

1. **Set the Speed.** The speed on most drill presses is adjusted by moving the drive belt from one pulley to another. In general, the smaller the pulley on the chuck axis, the faster it spins. A rule of thumb, as with any cutting operation, is that slower speeds are better for drilling metal, faster speeds for wood. If you need to change the speed, consult the workshop attendant to help with this step.
  - a. Unplug the drill press.
  - b. Raise the belt and pulley guard.
  - c. Release the belt tension by loosening the lock knob and the tension lever.
  - d. Position both belts on the desired pulleys.
  - e. Move the tension lever to the rear until the belts are properly tensioned and tighten two tension lock knobs.
2. **Fit the Bit.**
  - a. Open the chuck by hand rotating CW.
  - b. Slide in the bit.
  - c. Snug the chuck by hand around the bit's shaft making sure the bit is centered in the chuck.
  - d. Tighten the chuck's three jaws in all 3 holes with the key.
  - e. Verify that the bit is straight and properly aligned.
  - f. Remove the chuck key. If you don't, it'll become a dangerous projectile when you turn on the drill.
3. **Adjust the Table.**
  - a. Unlock the table using the table locking lever.
  - b. Using the table raising and lowering handle, set the table to the desired height for the operation you are to perform.
  - c. Re-lock the table.
4. **Gauging the Depth.** If you are simply drilling a hole in a piece of stock, you may not need to adjust the drill depth. However, if you are concerned with a stopped hole of a fixed depth, you may need to adjust the gauge to the desired depth.
  - a. Loosen the lock screw on the pinion shaft.
  - b. Rotate the gauge until the pointer lines up to the desired depth.
  - c. Tighten the lock screw.
5. **Secure the Workpiece.** Before operating your drill press, be sure that the workpiece to be drilled is fixed in place. Never operate the tool without firmly anchoring the workpiece.
  - a. The rotation of the drill bit may try to spin the wood or metal workpiece, so it must be clamped to the worktable, braced against the supporting column at the rear of the machine, or otherwise secured.
  - b. Always secure longer stock to the left, if it twists, it will hit the column instead of you.
6. **Drilling.** Once the drill press setup has been completed, putting it to work is easy.
  - a. Make sure the drill is spinning at full speed then present the bit to the workpiece, lowering the bit by swinging the pinion shaft handles.
  - b. Back the drill out often on deep cuts to keep the bit clean and cool.
  - c. Never force the drill.
  - d. Keep your fingers at least 4" away from the revolving chuck.
  - e. When drilling large holes, drill a smaller, pilot hole first.
  - f. Never use your hand to remove cuttings, use a brush and shopvac.
  - g. Once you've finished drilling the hole, release the downward pressure on the handle, keeping it under hand control allow its spring-loaded return mechanism will return it to its original position.
  - h. Remove and return the bit to its proper storage slot and container in the cabinet.
  - i. Clean up the drill table and area around the drill press.

Identification of Drill Press Parts

