

Explain dangers

If you have to push the tool beyond its capacity you can burn out the motor and injure yourself.

Leaning into the drill and pushing too hard is dangerous. If you lose balance or control, you can fall, or strain your neck, arm, and shoulder muscles.

Identify controls

[Have sample drills available to demonstrate.]

You need a drill powerful enough for the job. And you need a bit that is both sharp and suited to the job.

1/2- or 3/4-inch drills are heavy-duty and designed to be used with two hands. They have an auxiliary handle that you can screw into the top. This is what you want for drilling into concrete, steel, heavy timbers, and so on.

A heavier drill is also useful for hole saw bits and spade bits where the blade of the bit is considerably wider than the shank. These attachments require the power and control you get with a two-handled drill.

An **impact or hammer drill** is what you need for work such as drilling large holes in concrete or rock with a carboloy bit.

Good practice

- Heavy-duty drills or hammer drills have a low rpm and higher horsepower rating.
- Take a break when you have to, especially when you're up on a ladder or scaffold. You may even need help with some kinds of drilling.
- Check your balance and grip. Sudden torque can twist your arm and throw you off balance.
- When drilling deep holes, occasionally withdraw the bit several times with the motor running.

This clears cuttings from the hole.

- When you're drilling on loose material, securing the work is half the battle.
- **HANDS OFF.** Don't hold the work in your hand, on your knee, or against your boot while you're drilling. Clamp small pieces in a vice.
- When you're drilling, don't push or lean too hard on the drill. You can damage the tool or the work, or be thrown off balance if the drill twists and grabs.
- Punching a layout hole or drilling a pilot hole can make your work more accurate, efficient, and safe.

Demonstrate

Review types of drilling done by your crew. Inspect sample drills and bits used on the job.