

Safety Facts: Hand Drills*



A hand drill is a tool used for making holes or driving fasteners. It can be either hand-powered or more commonly today powered by either electricity or air. It is very portable and can come in a wide range of sizes. This toolbox topic will deal with powered hand drills that are electrically powered.



Key characteristics of hand drills

In the handle of the drill there is a trigger that acts as the on/off switch. Some drills have a locking device that allows the trigger to be left in the locked-on position. This is done to reduce muscle strain during prolonged use. The drills also have a switch that will change the direction of the chuck from forward to reverse and vice versa.

The chuck is the part that holds the screwdriver bit or drill bit. To open and close the chuck, some drills will use a chuck key. Newer models are keyless.

Some drills will come with a handle that can be attached to allow for better control of the drill with two hands.

Electrical drills fall into two types: cord and cordless. The cord type has a cord that must be plugged into an extension cord or electrical outlet. The cordless style uses an integral battery pack.

Why is it important?

A hand drill is a versatile and portable tool that can be used in many applications and locations.

Like any tool, if improperly used, it can lead to injuries, damage to material, etc. From 2017 to 2021 there were 1,398 WorkSafeBC claims from drills.

Associated risks/hazards

These are a few associated hazards with using a hand drill:

- Flying particles from the drilling process
- Entanglement of clothing, hair, etc. in the rotating chuck and drill bit
- High-pitched noise caused by drilling action
- Possible explosion if used in an explosive environment

- If the drill bit binds into the object being drilled, this may cause the drill to move resulting in muscle strain, laceration, etc.
- Contact with electrical energy due to frayed electrical cords or using the drill in a wet environment, potentially leading to electrical shock

Preventive next steps

- Be trained and authorized before using a drill as per Occupational Health and Safety Regulation (OHSR) Section 4.10
- Read and follow the manufacturer's instructions before using a drill
- Wear the appropriate personal protective equipment (PPE)
- Inspect the tool and work area for hazard before using the drill
- Disconnect the power source before changing the drill bit
- If equipped, remove the chuck key before starting drill
- Do not expose drills to rain or wet conditions
- If equipped, use the handle with two hands to allow for better control.



For additional resources visit:

[Powered Hand Tools - Drills](#) CCOHS website
[Authorization](#) OHSR Section 4.10

