

# Portable Tools: Power Tool Requirements

Department: Chemical and General Safety

Program: Portable Tools

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Authority: ES&H Manual, Chapter 25, Portable Tools

Use of portable power tools must meet the following requirements.

*Note Always visually inspect tools before use and remove any found to be defective from service.*

## General

1. Do not use a tool unless you have been trained to use it safely and know its limitations and hazards.
2. Make sure the tool has proper guards (see Portable Tools: Guarding Requirements).<sup>1</sup>
3. Do not operate tools in an area containing explosive vapors or gases.
4. Do not surprise or touch anyone who is operating a tool. Startling a tool operator could end up causing an accident or injury.
5. Use clamps, a vice or other devices to hold and support the piece being worked on, when practical to do so. This will allow you to use both hands for better control of the tool and will help prevent injuries if a tool jams or binds in a work piece.

## Switches and Controls

Certain types of power tools are required to have specific switches and controls, as follows.

The following power tools must be equipped with a constant pressure switch or control that will shut off the power when the pressure is released:

- Circular saws with blade diameters over two inches
- Chain saws (electric, hydraulic, pneumatic, or gasoline)
- Percussion tools without positive accessory means

The following power tools must be equipped with a constant pressure switch or control that will shut off the power when the pressure is released but may have a lock-on control provided. The control can be turned off with a single motion:

- Drills
- Tappers
- Fastener drivers (for example, staplers, nailers)
- Grinders with wheel diameters over two inches
- Disc sanders with disc diameters over two inches

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1 Portable Tools: Guarding Requirements (SLAC-I-730-0A21S-022), <http://www-group.slac.stanford.edu/esh/eshmanual/references/toolsReqGuarding.pdf>

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- Belt sanders
- Reciprocating, saber, scroll, and jig saws with blade shanks greater than nominal 1/4 inch

All other power tools must be equipped with a momentary contact “on-off” control or other controls. Operating controls on all power tools must be located to minimize the possibility of accidental operation.

### ***Personal Protective Equipment***

1. Wear or use personal protective equipment (PPE) or clothing that is appropriate for the work you are doing; this may include items such as safety glasses or goggles, hearing protection, dust mask, gloves, safety boots or shoes, or rubber boots.
2. Do not wear loose clothing or jewelry while using revolving power tools. Tie back long hair or wear appropriate hair protection to prevent hair from getting caught in moving parts of equipment. When using revolving power tools, wear gloves when the tool is taken to the work; do not wear them when the work is taken to the tool.

### ***Powering On and Off***

1. Switch off tools before connecting them to a power supply.
2. Disconnect the power supply before making adjustments or changing accessories.
3. Do not disconnect the power supply of the tool by pulling or jerking the cord from the outlet.
4. Remove any wrenches and adjusting tools before turning on a tool.
5. Do not bypass the ON/OFF switch and operate the tools by connecting and disconnecting the power cord.
6. Do not walk around with a plugged-in tool with your finger touching the switch.
7. Do not bush away sawdust, shavings or turnings while the tool is running.
8. Do not leave a running tool unattended. Do not leave it until it has been turned off, has stopped running completely, and has been unplugged.

### ***Housekeeping***

1. Follow good housekeeping: keep the work area free of clutter and debris that could be tripping or slipping hazards.
2. Keep power cords away from heat, water, oil, sharp edges, and moving parts. They can damage the insulation and cause a shock.
3. During use, keep power cords clear of tools and the path that the tool will take.
4. Suspend power cords over aisles or work areas to eliminate stumbling or tripping hazards.

### ***Cleaning and Maintenance***

1. Ensure that cutting tools, drill bits, and so on are kept sharp, clean, and well maintained.
2. Do not clean tools with flammable or toxic solvents.
3. Cleaning surfaces or removing sawdust, metal turnings, and so should be performed by mechanical means (brush, broom) with the use of compressed air as last resort.
4. If compressed air is used for cleaning the pressure at the nozzle tip must be less than 30 PSI. All personnel in the area will be required to wear eye protection in keeping with federal regulations.
5. Store tools in a dry, secure location when they are not being used.