

Shop Supervisor: \_\_\_\_\_

Date Approved: \_\_\_\_\_

## Sanders

Woodworkers know there is a time and place for sanding by hand, such as for small and intricate jobs where powered wood sanders can damage or obscure sharp edges and fine details. For large sanding jobs, where work progresses from rough to fine-finished stages, there is no replacement for electric sanders. There are different sander types: **belt sanders**, **orbital sanders**, **disc sanders**, and **vertical spindle sanders**. Each type has its specialized purpose; however, often these purposes overlap and one type of sander can do similar wood finishing work as another. All electric sanding machines present particular hazards to users.



### Personal Protective Equipment

| Tie Back Hair & Secure Loose Items                                                                                    | Closed Toe Shoes                                                                   | Eye/Face Protection                                                                                                               | Hearing Protection                                                                 | Protective Clothing                                                                 | No Gloves Advised                                                                               | Respiratory Protection                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                                     |  |                                                 |  |  |             |                          |
| Tie back long hair and secure loose clothing that could get caught in rotating parts. Remove rings and other jewelry. | Appropriate enclosed footwear should be worn.                                      | Wear ANSI Z87.1 compliant safety goggles to protect eyes. Face shields may be necessary to protect from dust, shards, and debris. | Hearing protection should be worn when noise levels are excessive.                 | Close-fitting or protective clothing, such as an apron, is encouraged.              | Gloves can get caught in rotating parts. Follow the "4 inch" rule to keep hands away from harm. | Respiratory protection (e.g. dust masks) may be desired or required when sanding. Contact EH&S for guidance. |

## Potential Hazards

Be aware of the following potential hazards when working with sanders:

- **Mechanical:** points of operation, pinch points, shear points, power transmission points
- **Operational:** heat, dust/chips/shards, noise, unstable loads/stocks
- **Chemical:** coolants, cleaning solvents, lubricants
- **Electrical/Energy Sources:** exposed wiring, malfunctioning equipment, unexpected start up/shut down

## Before Use

- Know the location of start and stop switches or buttons, and keep the sanding area free of tools and other materials.
- Inspect abrasive belts, drums, or discs before using them. Replace belts, drums, or discs that are worn, frayed, or excessively used in spots.
- Be familiar with how to operate the local exhaust ventilation (LEV) system for the sander, if equipped, and turn it on before beginning work. Ensure that the LEV is well maintained to work effectively.
- Ensure the belts, drums, or discs are correctly mounted before beginning work, and that they are the correct size for the machine.
- Check the [Safety Data Sheet](#) for potential health hazards of specific materials (e.g., western red cedar) and chemicals (e.g., lubricants, solvents).
- **Avoid sanding stock that has loose knots, splits, defects, or foreign objects (such as metal, stone, etc.) embedded in the material.** Small or thin work pieces should be sanded by hand instead of with an electric sander.
- Ensure that fences and other machine guards are in place and recommended personal protective equipment is worn.
  - The work rest must be minimally within  $\frac{1}{8}$  (one-eighth) inches of the belt/disc.
  - If adjustments are needed for the work rest, unplug the power (or lockout/tagout if hard-wired) before adjusting.
- Stand to one side of the machine when turning on to avoid kickback (when the stock can be violently thrown back toward the operator).

### During Use

- **Concentrate on the task at hand; avoid distractions.** Most injuries occur when the operator is not paying full attention to what they are doing.
- Keep the work rest as close to the sanding surface as possible without touching it.
- Be cautious when a sanding operation requires locating fingers close to the abrasive surface. It is a best practice to keep hands at least 4 inches away from the surface.
- Sand pieces by following the wood grain. When using a disc sander, sand only on the side of the disc that is moving downwards towards the table/platform.
- Sand at a moderate rate with light to medium pressure. Do not force the piece.
- Stand erect in front of the sander with both legs straight and slightly apart. Avoid stooping or leaning into the machine.

### After Use

- Turn off and unplug the machine and ensure that it is ready for the next person to use. Remain in the area until the machine has come to a complete stop.
- Once the sanding machine has stopped, shut down the LEV system, if equipped.
- Sweep or use a shop vacuum to collect any debris that resulted from sanding on the floor or other surfaces. Avoid cleaning with compressed air to prevent injury.
- Store stock materials in a neat and secured manner; do not accumulate excess combustibles. Keep aisles and exits clear.
- Wash hands and exposed skin thoroughly after completing work and before leaving the shop area.

### Emergency Equipment and Procedures



- Report all incidents to the shop supervisor, including injuries, equipment damage, and near misses.
- Know the location of the nearest emergency equipment and items, such as the emergency stop/shut-off for the specific machine, eye wash, first aid kit, fire extinguishers, fire alarm pull stations, and emergency exits.

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