

CNSI Innovation Workshop Combination Sander User Outline

This guide may be found online through the Innovation Workshop and Microfluidics wiki.

Location

The combination belt/disk sander is located in 2448 Elings Hall on the bench next to Fume Hood #3.

Safety

- Follow the basic machine tool safety protocol: safety glasses, long pants, closed toe shoes, no loose clothing, jewelry or hair that may get caught in the moving machine
- Workpiece must be supported on the rest so that it is not pulled out of your hand.
- Connect a vacuum to the sander if you will be generating a lot of dust.
- Friction may heat workpiece to high temperatures - be careful not to touch hot surfaces.
- Keep body parts clear of sandpaper. Use a tool to hold small parts.
- Don't wear bracelets, dangling articles of clothing, gloves or long sleeves while using the sander.

Training

Training is required before using the sander.

Overview

The grinder is a benchtop grinder with two abrasive discs. It is used to remove material

User Guide

Sequence of operation:

1. Wear proper PPE (safety glasses), face shield if needed
2. Mark workpiece, for example with a marker or scribe tool.
3. Turn on grinder. Stand to one side of the grinder until the wheel reaches operating speed.
4. Bring work into contact with the grinding wheel slowly and smoothly, without bumping.
5. Apply gradual pressure to allow the wheel to warm up evenly. Use only the pressure required to complete a job.
6. Move the work back and forth across the face of the wheel. This movement prevents grooves from forming.
7. Remove workpiece, turn off grinder
8. Use the shop vacuum to clean metal dust from work area.

Frequently Asked Questions

- What materials can I grind?
 - Ferrous (iron containing) metals such as steel and cast iron
 - Never grind softer metals such as aluminum or magnesium.
 - Never grind plastics or wood

Accident Response

- In the event of injury, contact lab staff and emergency services if necessary (?)

Maintenance

- Use wire brushes to clear metal residue out of grinding wheel
- Adjust grinding wheel guide as wheel wears

Supplies (In drawer labeled “Grinder Accessories”)

- 2 silicon carbide 8” grinding wheels
- 1 buffing wheel
- Wire bristle brushes
- Grinding compounds

From:

<https://microfluidics.cnsi.ucsb.edu/wiki/> - Innovation Workshop Wiki

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