Belt & Disc Combination Sander
The Foundry

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BELT & DISC COMBINATION SANDER

The belt & disc combination sander uses a motor to spin fast moving, abrasive sheets used in shaping, smoothing and finishing wood and other materials. In the Foundry, wood and certain plastics, are the only materials permitted for use on this machine.

SAFETY

For the Woodshop in general...

- **Shop Buddy:** You are not allowed to work alone in the Woodshop. A buddy is there to ensure your safety and to call for help if needed. Your buddy *does not have to be* Woodshop trained, but if untrained, they are not allowed to use the Woodshop equipment. If an untrained buddy uses the Woodshop equipment, your Woodshop access will be immediately and permanently revoked.
- **Eye Protection:** These machines can send sawdust, wood chips and other fragments flying – safety glasses protect your eyes from harmful material.
- **Close-Toed Shoes:** Tools, pieces of wood and other sharp objects can fall and close-toed shoes will protect your feet from cuts, bruises and even breaks.
- **Long Pants:** Long pants will protect your legs from cuts, bruises and splinters that might come from handling wood.
- **No Jewelry:** Rings, bracelets, dangling necklaces, watches, headphones and sweatshirt strings can all get caught in the spinning blades or bits, which can drag you into the machine.
- **Long Hair Secured:** Like jewelry, long hair can also get entangled in machines, and potentially drag you into the machine.
- **No Food or Drink:** Sawdust and woodchips, in addition to the glues and paints used on the wood, can get into your food or drink and be toxic. Residue from food or drink can also make the tools and machines messy.
- **No Metal:** Using metal on any of these machines will produce sparks, which can ignite sawdust, resulting in a fire or explosion.

For the Belt & Disc Combination Sander specifically...

- **One Person:** Only one person can work on this machine at a time. There should never be someone using the disc sander while someone else uses the belt sander as this wears on the motor and can break the machine.
- **Flat on Work Table:** Always hold your piece flat on the work table as you slide it forward. A piece that is not braced on the work table will be jerked around, and often thrown, by the sander.
• **Sand Downward:** Only use the right side of the disc sander. The disc rotates clockwise, which means the left side of the disc is moving upwards while the right side of the disc is moving downwards, if you sand on the left side, the disc will launch your piece up towards your face.

### MACHINE ANATOMY

- **Belt:** Spins downward to remove small amounts of material cleanly.
- **Disc:** Spins clockwise to remove large amounts of material roughly.
- **On/Off Switch:** Turns the belt and disc on/off together.
- **Work Table(s):** Stationary metal platforms that you must brace your pieces on while sanding.
OPERATING THE MACHINE

Sanding with the Belt Sander

1. Before turning the machine on, make sure the work table is set to the desired angle relative to the belt.
2. Make sure the gap between the work table and the belt is ⅛".
3. If your piece is small or difficult to handle, you may use vice grips to hold your piece. Just make sure to not sand the vice grips.
4. Switch the machine on and give it a few seconds to gain speed, standing clear of the machine.
5. Place your piece down flat on the work table and slide it towards the belt.
6. While sanding, always hold your piece down flat on the table.
7. Move your piece side to side across the entire belt to ensure the sanding belt is worn-down equally. If the sandpaper seems gunked up, run the abrasive cleaning stick (looks like a large rubber eraser) over the belt while the motor is on until the sandpaper appears clean.
8. Once you've finished sanding, pull your piece clear of the belt.
9. Switch the machine off and wait until the machine comes to a complete stop. Never leave the machine unattended while the belt is still moving.
10. Once the belt and the disc are completely still, clean up the work area with either the shop vac or a dust pan/brush.

**DO NOT** hold your piece up at an angle when sanding.  
**DO** brace your piece on the work table when sanding.
Sanding with the Disc Sander

1. Before turning the machine on, make sure the work table is set to the desired angle relative to the disc.
2. Make sure the gap between the work table and the disc is ⅛".
3. If your piece is small or difficult to handle, you may use vice grips to hold your piece. Just make sure not to sand the vice grips.
4. Switch the machine on and give it a few seconds to gain speed, standing clear of the machine.
5. Place your piece down on the work table and slide it towards the disc.
6. Only use the right half of the disc i.e. the side of the disc that moving down towards the work table. Do not use the left side of the disc that is spinning up, as the disc will launch your piece up towards your face.
7. When shaping your piece, be mindful that the disc has different cutting speeds. The disc is moving slower towards its center and gains rotational speed at its periphery. This means that more material will be removed, more quickly, at the periphery than towards the center of the disc where less material will be removed, more slowly.
8. Once you’ve finished sanding, pull your piece clear of the disc.
9. Switch the machine off and wait until the machine comes to a complete stop. Never leave the machine unattended while the disc is still moving.
10. Once the belt and the disc are completely still, clean up the work area with either the shop vac or a dust pan/brush.

**DO NOT** sand your piece on the left side of the disc sander. **DO** sand your piece on the right side of the disc sander.