

STANDARD OPERATING
PROCEDURES DOCUMENT

HORIZONTAL BANDSAW

Scope and Responsibilities

This standard operating procedure (SOP) applies to all personnel who operate and instruct on the safe operation and use the horizontal bandsaw. In a school setting this includes,

- **Administrators/Teachers:** Ensure operators are trained and the SOP is followed
- **Students/Teachers/Operators:** Follow the owner/operators manual, industry recommendations, this SOP, guarding is in place, and wear the appropriate personal protective equipment (PPE)

SAFETY IS A PRIORITY !

DO NOT use this machine unless you have received instruction in its safe use and operation and have been given permission by your teacher.

To ensure the safe and efficient operation of the horizontal bandsaw, this machine requires:



Safety glasses must be worn at all times in work areas.



Hearing protection may be required for certain operations.



Closed toe / CSA approved footwear must be worn at all times in work areas.



Close fitting / protective clothing must be worn.



Rings and jewelry must not be worn.



Long and loose hair must be contained.

Personal Protective Equipment (PPE)

- Safety glasses or face shield
- Hearing protection
- Proper attire, close-fitting clothing and/or protective shop coat
- Closed-toed footwear (CSA Safety footwear is required on Co-Op placements in industry)

Pre-Operational Checks

- Always refer to the manufacturer's manual
- Repair or replace damaged equipment immediately
- Perform visual inspection of equipment prior to use, including any electrical cords for damaged prongs, cracked insulation, exposed wire, etc. (Damaged equipment must be locked out)
- Ensure the work area is clean and free of obstructions, trip hazards and other materials
- Maintain proper adjustment of blade tension, blade guides, guards, and thrust bearings
- Securely hold workpieces firmly in the jaws of the vice
- Check that the bandsaw blade is properly mounted, in good condition, tracking correctly with proper tension
- Ensure hydraulic damping mechanism functions properly
- Verify that all guards are in place, maximize blade coverage and are secured properly
- Check coolant delivery system to allow for sufficient flow of coolant
- Locate and ensure you are familiar with the operation of the ON/OFF starter and E-Stop.

This equipment SOP provides a general guideline for operating a horizontal bandsaw. Always refer to the manufacturer's manual, industry best practices, and specific workplace safety protocols for detailed instructions. IF IN DOUBT, STOP! ASK YOUR INSTRUCTOR or SUPERVISOR.

Operational Steps

1. Preparation

- Make sure you have been authorized to use this piece of equipment - you have received training, passed the test, have demonstrated the safe use of this piece of equipment and have a safety passport signed
- You are “shop ready” – trained, proper clothing, wearing required PPE, etc.
- Lift the head of unit up and lock it in the upward position.
- Set the angle of the vice or check it to ensure its squareness
- Clamp work piece firmly into the vice. Long material must be supported
- Adjust blade guards to cover unused portion of blade
- Never override or defeat a safety device
- Use a ‘V’ block for cylindrical pieces.

2. Starting the Machine

- Ensure hands are away from the blade, and then turn the machine on.
- Turn on the coolant system (if applicable) and adjust the flow rate.
- Wait for machine and coolant to come up to speed before beginning cut.

3. Sawing Operation

- Allow the upper head assembly to come down slowly until the teeth are cutting the material
- Adjust feed rate or cutting speed according to teacher’s instructions or owner’s manual
- Keep hands away from the point of operation during cutting
- Turn off the machine and bring it to a complete standstill if the blade is to be lifted out of an uncompleted or jammed cut
- Stop the machine and bring it to a complete stop before removing scrap pieces from the vice or making adjustments
- Stop the saw immediately if the blade develops a ‘click’. Report it to your teacher
- Ensure the cutting head is locked in the upward position before removing work piece from vice.

4. Shutting Down the Machine

- Turn off the bandsaw and allow to come to a complete stop
- Turn off the coolant system (if applicable)
- Release and remove your workpiece
- Clean the machine and work area.

Post-Operational Checks

- Inspect the blade for wear or damage (missing teeth)
- Clean the machine as required
- Ensure the cutting head is locked in the upward position
- Report any issues or maintenance needs to the supervisor/instructor.

Common Problems of Operation

- Machine does not power up
- Vise does not clamp
- Blade does not move, but saw powers up
- No coolant
- Blade jumps or tracks to one side
- Blade breakage
- Hydraulic dampener does not function.

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Safety Precautions

- Never leave the bandsaw unattended while it is running
- Make sure there is adequate coolant flow
- Keep hands and body parts away from the blade during operation
- Wear Personal Protective Equipment (P.P.E) such as safety glasses, safety goggles, face shields, proper clothing as appropriate
- No loose clothing, long hair, or jewelry is allowed in the shop
- Only operate the horizontal bandsaw after you have received instruction and permission from the teacher
- Be aware of the positions of the on/off switches and emergency STOP button
- See that the blade is off of the work before starting the cut
- Open the hydraulic dampener control slowly
- Never push down on the cutting head while it is cutting.

Common Injuries Sustained

- Cuts and burns
- Entanglement of loose sleeves, long hair, etc.
- Crush injuries from unsupported material.

Maintenance

- Always refer to the manufacturer's manual
- Regularly check and repair or replace damaged or worn equipment immediately
- Clean and lubricate the machine as required
- Keep a maintenance log for the machine
- Inspect the electrical cords for damage, cracked insulation, fraying, etc.
- Inspect the blade before use.

Work Zones

- Typically, in front of the machine approximately 1 meter (3 feet) the length of the machine
- Work zone or area should be identified on the floor (ie: yellow paint or tape)
- Work zone or area should not be entered while operator is using the machine

Additional Information can be found at,

Ontario Council for Technology Education [SAFEdocs](#) and [ToolSAFE Videos: OCTE](#)

Westway Machinery <https://www.westwaymachinery.com/blog/a-guide-to-band-saw-blades/>

Dake Corporation <https://blog.dakecorp.com/en-us/everything-you-need-to-know-about-bandsaw-blades>

Canadian Center for Health and Safety

https://www.ccohs.ca/oshanswers/safety_haz/metalworking/metalsaws_cold.html