

# BAND SAWS

## OFTEN UNCONSIDERED RISKS & MITIGATIONS

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### RISK ASSESSMENT

All machine safeguarding should start with a risk assessments for the specific task, application, and environment. A great place to start that assessment is with consideration of OSHA 1910.212(a) (1):

*“One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are—barrier guards, two-hand tripping devices, electronic safety devices, etc.”*

Nevertheless, risk assessments for standard shop tools share many similarities and the discussion below will help to identify hazards and remediation strategies.

### MOST SIGNIFICANT BAND SAW HAZARDS

1. **Contact with the Blade** (Amputations and Lacerations Common)
2. **Contact with Rotating Parts** (Amputations and Lacerations Common)

### OFTEN UNCONSIDERED FACTORS

Many EHS experts fail to consider the greater context of the operation, including the time before and after the intended operation. There are two significant exposures to consider:

#### 1. **Silent But Deadly Coasting**

Band saws are known to coast after being turned off, with continual motion of the blade persisting for as long as two minutes. Best practices for operators dictate that they wait until the blade comes to a complete stop before reaching towards the blade to clear the table insert, remove debris, or retrieve their material cutoff. The reality is that most operators don't wait. An even greater risk is that an operator may walk away from a coasting band saw and that a subsequent operator will reach to adjust the blade guard or otherwise come in contact with a coasting blade. For these reasons, a coasting band saw blade should be considered a point-of-operation hazard under OSHA 1910.212(a)(1) and it should be mitigated with a braking system.

#### 2. **Slips & Accidental Contact**

During a normal cutting operation, the most significant hazard is an operator slipping, misjudging, or otherwise coming into contact with the blade. Fences, jigs, and push sticks should be used during these cutting operations to keep operators clear.

# MITIGATION STRATEGIES

The table below focuses on the less commonly known mitigation strategies and does not include other common requirements such as chip guards, shields, and PPE.

Activity	Hazard	Mitigation
Making a Cut	Operator contact with moving blade or rotating parts.	<ul style="list-style-type: none"> <li>• The use of fences, jigs, and push sticks during normal cutting operations.</li> <li>• Functional blade tension control system and guards for pulley mechanism, feed rollers, and entire blade except for point of operation [1910.213(i-d)].</li> <li>• Proper height adjustment of blade guard [OSHA 1910.213(i)(1)].</li> </ul>
Before/ After Cut	Operator contact with coasting blade.	<ul style="list-style-type: none"> <li>• Bring the saw blade to a controlled stop before the operator leaves or reaches near the blade by installing a friction or motor brake [OSHA 1910.212(a)(1)]. ⚡</li> </ul>
Emergency	An immediately hazardous situation requiring quick remediation.	<ul style="list-style-type: none"> <li>• Stop the blade quickly with a friction or motor brake. ⚡</li> <li>• Approved and accessible emergency stop button [NFPA 79]. ⚡</li> </ul>
Maintenance or Outage	Operator contact with rotating parts or moving blade	<ul style="list-style-type: none"> <li>• Install anti-restart protection [1910.213(b)(3)]. ⚡</li> <li>• Approved lockout/tagout means and procedures [OSHA 1910.147].</li> </ul>

Table 1 – Band Saw Hazards & Mitigations; GREEN = preventative, RED = lessening of incident severity

## AN ALL-IN-ONE SOLUTION ⚡

The MAKESafe Power Tool Brake is a plug-and-play braking solution for band saws that also includes anti-restart and emergency stop. The lightning symbol above indicates each of the mitigation strategies provided by this all-in-one device. All you have to do is plug it in, perform a calibration that takes less than five minutes, and you’ve added multiple machine safeguards to your band saw. See a demonstration video and device specifications online for more information.

