



## Saws cause serious harm in the blink of an eye

A 37-year-old woman working at an Iowa processor lost two fingers when her hand came into contact with the blade of a band saw. The worker was hospitalized, and the company was penalized \$5,000 for the violation.<sup>1</sup>

At a California processor, an employee cutting meat with a band saw neglected to adjust the guard, which was just 2 inches above the product. The saw caught a bone, and the meat slipped out of the employee's hand, which made contact with the blade and cut off his finger. An OSHA investigation found that a guarding violation had occurred, and the agency issued a citation to the processor.<sup>2</sup>

As he moved the product along a sliding table toward the band saw, a meat plant worker in Connecticut lost control of the product as it was pulled into the blade. It cut through the three middle fingers on his left hand. He spent two days in the hospital following the amputation, and OSHA issued multiple citations totaling more than \$11,000.<sup>3</sup>

Despite the otherwise alarming data, it's important to note that over the last two decades, the incidence of occupational injuries and illnesses in the meat and poultry processing industries has fallen – largely to the credit of worker safety programs.

For example, the poultry sector's slaughter and processing workforce has fallen by 82 percent, according to the "2016 Injury and Illness Report" released in November 2017 by the Department of Labor's Bureau of Labor Statistics (BLS). The total recordable poultry processing illness and injury rate for 2016 was 4.2 cases per 100 full-time workers annually, down from 4.3 in 2015. The poultry industry's rate of 4.2 was below the rate of 6.9 for similar agricultural industries in regard to injuries per 100 full-time workers and lower than the rate of 4.7 for the entire food manufacturing sector.<sup>4</sup>

## Amputations from band saws still a threat

Worker safety improvements aside, amputations from band saws continue to be a serious threat to both worker safety and food safety throughout the nation's meat and poultry processing plants.

Red meat processing recorded 5.1 cases per 100 full-time workers, slightly higher than the overall food manufacturing industry. In fact, red meat processing leads all food manufacturing industries in amputations (5.6 per 10,000 full-time workers) and ranks fifth of all food manufacturing industries in cuts and lacerations – at 16.1 cases per 10,000 full-time workers, according to BLS.<sup>5</sup>

The BLS has reported that injury and illness rates for the meatpacking industry are nearly three times higher than the national average – and among the most serious injuries are amputations caused by blades operating on the slicers, dicers and saws throughout a facility.

In the blink of an eye, a meat saw can do serious harm.

Since January 2015, the Occupational Safety and Health Administration (OSHA) now requires employers to report work-related fatalities within eight hours and work-related hospitalizations, amputations and losses of an eye within 24 hours. The former federal rule required employers to report all work-related fatalities and hospitalizations of three or more employees within eight hours of the incident.

The new rule applies to all employees in 29 states covered by federal OSHA jurisdiction. The requirement does not cover employers in the remaining states – several of which are major meat and poultry centers, such as Iowa, Maryland, North Carolina and Virginia. According to a recently released OSHA summary of all severe injury reports from January 2015 through September 2016, employers in those 29 states reported 17,533 incidents of the most severe work-related injuries.

Three meat and poultry companies were listed in the top 25 of the more than 14,000 companies responding to the report.

Additionally, according to a 2016 report issued by OSHA, within the first year of the agency's severe injury reporting program, employers notified the agency of more than 10,300 incidents involving severe work-related injuries - including 7,636 hospitalizations and 2,644 amputations.

The animal slaughtering and processing sector ranked eighth among all industries for the highest number of severe injury report. (Table One)

**Table One**  
**Top 10 Industry Groups Reporting Severe Injuries**

<b>Industry</b>	<b>Severe injury reports</b>
Foundation, Structure, and Building Exterior Contractors	391
Building Equipment Contractors	343
Support Activities for Mining	323
Nonresidential Building Construction	271
Postal Service	229
General Medical & Surgical Hospitals	221
Grocery Stores	215
Animal Slaughtering & Processing	213
Utility System Construction	201
Plastics Product Manufacturing	196

*Source: Occupational Safety and Health Administration*

In reality that number may be higher, the agency published in the same report:

“OSHA believes that many severe injuries — perhaps 50% or more — are not being reported. We base this conclusion on several factors, including injury claim numbers provided to us by state workers’ compensation programs.”<sup>6</sup>

The agency also recently increased the unadjusted penalty for not reporting a severe injury to a maximum of \$7,000 from \$1,000.

## **Food safety at risk as well**

It's not just worker safety that's compromised by the dangers of conventional band saws. The safety of the food on the processing line also is jeopardized when workers are injured.

It's no secret that bacteria such as salmonella, listeria monocytogenes and E. coli are commonly found on the surface of processed meat and poultry, but the counts can vary in concentration - and cross-contamination between carcasses and contact surfaces (such as band saws and workers' hands) greatly increases contamination.

In one study published in the 2002 Journal of Applied Microbiology, researchers confirmed that the main cross-contamination site for bacteria transfer occurred during evisceration. Yet they also reported that E. coli initially present on the scraper/dry polisher was transferred to wet polisher blades, band-saws and butcher's hands despite a post-dry polishing singeing step.<sup>7</sup>

There is no doubt that even one injury, however serious, is too much.

## **Band saw uses fastest camera on the market**

The new Hollymatic Defender 4000 Band Saw effectively stops the blade in .040 seconds with no damage to the saw with a proprietary low-inertia high horsepower servo motor - rather than the more conventional mechanical blade (which is operated by a standard AC motor and gearbox). Unlike most mechanical brakes that have been implicated in injuries, the Defender stops the blade that quickly to protect operators from injury.

Using proprietary technology, Hollymatic also uses the fastest camera on the market, with a rate of 2000 frames per second and a camera processing system with a total processing and output time of less than 9 milliseconds.

In other words, the camera's processing time has been reduced to around 4 milliseconds. (Total processing time means that the camera will take a picture, analyze it, decide if the image is good or not, and tell the saw to stop - all in .040 seconds.)

The Defender Band Saw also includes a highly specialized drive unit and a proprietary, zero backlash, wash-down duty gearbox.

Designed with patented state of the art and innovative technology, the Defender provides features and benefits not available on other meat saws.

The exclusive Visual Glove Detection System uses a camera to detect special colored gloves worn by the operator. Upon detection in a predetermined zone the system activates a processing and braking mechanism to stop the blade immediately, greatly reducing unintended or inadvertent contact with the blade. The patent-pending detection system includes gloves that are made of cotton or rubber and are worn by the operator and verified before every start up to ensure proper P.P.E. is being worn.

Other benefits:

- The braking mechanism does not damage the blade or the saw. After a short cool down period the saw can be restarted and put back into operation. In other words, no blade changes are necessary.
- Coded safety interlocking sensors allow the braking system to engage immediately when either the upper wheel door or lower wheel door is opened.
- When the saw is stopped the pneumatic blade guard automatically lowers reducing the risk of inadvertent contact with a stationary blade.

As the meat and poultry processing industries continue to reduce injuries on the job, Hollymatic Corporation has developed proprietary technology to create a meat saw that stops the blade 10 times faster than the blink of an eye.

That ensures more secure worker safety, increased food safety and a more trusted brand all around.

---

## Footnotes

- 1 [https://www.osha.gov/pls/imis/establishment.inspection\\_detail?id=317572261](https://www.osha.gov/pls/imis/establishment.inspection_detail?id=317572261)
- 2 [https://www.osha.gov/pls/imis/establishment.inspection\\_detail?id=314866831](https://www.osha.gov/pls/imis/establishment.inspection_detail?id=314866831)
- 3 [https://www.osha.gov/pls/imis/establishment.inspection\\_detail?id=445416.015](https://www.osha.gov/pls/imis/establishment.inspection_detail?id=445416.015)
- 4 <https://www.bls.gov/news.release/pdf/osh.pdf>
- 5 <https://www.bls.gov/news.release/osh.htm>
- 6 <https://www.osha.gov/injuryreport/2015.pdf>
- 7 <https://www.ncbi.nlm.nih.gov/pubmed/12067387>



**Hollymatic Corporation**  
600 E. Plainfield Road  
Countryside, IL 60525  
+1 708-579-3700 phone  
+1 708-579-1057 fax  
[hollymatic.com](http://hollymatic.com)