



Using the 61.41ADS CNC, Icon Shelter Systems Inc. is able to cut parts for its gazebos.



# Improved sawing

Fabricators achieve versatility and speed with automatic, programmable band saws

**I**f it's not broken, don't fix it. That used to be the sentiment when dealing with sawing systems. Many fabricators use traditional vertical band saws, which were designed in the 1950s, to double cut or miter. Not anymore.

The 61.41ADS CNC and the 71.51ADS CNC from BTM Saws, Woodstock, Ontario, are fully automatic and programmable band saws that come standard with a 10 ft. single-stroke bar feed and the ability to miter 60 degrees right and left, allowing for versatility and speed not seen in traditional vertical band saws.

Speed is important, particularly for some material processors. When defense contractor Lanzen Fabricating Inc., Roseville, Mich., purchased the 61.41, it was hoping for faster production on its fenders, tank parts and bumpers for 5-ton trucks and headlight guards, among other products.

The 61.41 saw at Lanzen Fabricating is

"100 percent better than what we had before," says Chuck Fick, Lanzen Fabricating production supervisor.

"We make parts for the military," Fick says. "We make anything that would go on a military vehicle. All contractors require fast turnaround on their products, more now than ever. People want things done now. This machine definitely helps us keep up with customer demand," he says. The blade speed is variable from 65 to 330 sfm with an electronic frequency regulator standard.

The automatic features of the machine

# Sawing Systems

are helping Lanzen speed production on the shop floor. "Before, I was only able to stack and cut four or five pieces at a time, but that's all. Now we can bundle cut many pieces at a time," says Fick. "The CNC is far more productive."

## Sawing capabilities

Not much has changed in terms of the design of vertical band saws in the past 50 years, according to Ian Tatham, president of BTM. When the company saw the opportunity to improve on an existing design, it focused on expanding mitering degrees, improving shuttle and head swing speeds and making features automatic.

Many traditional machine heads will miter 45 degrees by 45 degrees, but BTM's machines can reach an additional 15 degrees, and they have the ability to control angles on either side. "Any fabricator, especially those who are doing miter cuts, can take a square tube and do a 45-degree angle on one end and a 30-degree angle on the other end. They can control this by inputting that information in the controls, and the operator does it all automatically," says Tatham.

Shuttle and head swing speeds also have a direct affect on production speeds. The faster the swing speed, the more cut parts are produced. Typically, a conventional machine with a shuttle and head swing will drive hydraulically, which is "very slow and not very accurate," says Tatham. BTM uses a rack and gear with a separate motor drive, which makes the head swing four times faster than the conventional hydraulically driven vertical band saw.

Though the machines are "basically identical" in terms of form, function and design, according to Tatham, they have different capacities for companies with differing processing abilities. For companies that process structural material with smaller blades, the 61.41 has a capacity of 16 in. by 24 in. at 90 in. The 71.51, ideal for larger blades, has a capacity of 20 in. by 28 in. at 90 in.

## Multiple savings

Icon Shelter Systems Inc., a Holland, Mich.-based small business, purchased the 71.51 to cut structural steel tubing for gazebos. For Icon, having a bigger and



Custom aluminum extrusions, cut by the 71.51ADS CNC are used as part of the base weldment for an aluminum shipping container at Lanzen Fabricating Inc.

“When there are less workers and a more automatic system, there is less lost time due to injury.”

Dennis Walters, Icon Shelter Systems Inc.

more efficient machine that could handle a variety of angles was necessary for its growing business. When a traditional hemp saw could not stand up to the demanding workload at the facility, Icon turned to BTM. Today, its facility runs the 71.51 machine anywhere from eight to 12 hours per day, six days a week.

"This machine exceeded what BTM told us it would do," says Dennis Walters, manufacturing supervisor at Icon Shelter Systems.

After looking at eight different machines before purchasing the 71.51, Walters decided BTM's machine was the best not only because it could increase production at its facility but because it was more cost-effective.

Icon was able to reduce its employee base because the machine didn't require as many workers to operate. "What used to take almost three guys now only takes one," says Walters. "When there are less workers and a more automatic system, there is less lost time due to injury, so it created a much more efficient work environment for us as well."

The machines also help reduce consumables costs. They are constructed with special attention to the reduction of vibrations that result during the cutting process,

which results in poor blade life, says Tatham. Once a band saw blade is tensioned between the wheels of a band saw, the vibrations resonate through the blade during cutting, causing excessive noise and ultimately reducing the life of the blade. The BTM machines are heat stress relieved to prolong the life of the blade and to reduce noise. The end result is a reduction in blade costs over the machines' useful life, he says.

With cost-efficiency, higher swing speeds, automatic features and an increased range of angle cuts, the 61.41 and 71.51 machines have become improved options for processing structural material. For BTM, it's a progression into how processors do business. For Icon and Lanzen, it's an improvement in shop efficiencies and more money in the bank. **FFJ**

**BTM Saws**, Woodstock, Ontario,  
519/539-0450,  
www.btmsaws.com.

**Icon Shelter Systems Inc.**,  
Holland, Mich., 800/748-0985,  
fax: 616/396-0944, www.iconshelters.com.

**Lanzen Fabricating Inc.**,  
Roseville, Mich., 586/771-7070,  
fax: 586/771-2490, www.lanzenfab.com.