Office furniture manufacturer discovers flexible processing with multiple system upgrades

F or the past 30 years, Artopex Plc. has earned a reputation for building quality office furniture in Quebec, while building solid busi-
ness relationships with its customers throughout North America. In 1990, Daniel Pellenzer and his two brothers created Artopex with a clear vision—realizing steady growth while maintaining healthy, secure finan-
cial management processes.

Today, this privately-owned corporation, headquartered in Granby, Quebec, has become a prominent office equip-
ment manufacturer offering a full line of wood veneer furniture, laminate case goods, executive furniture, seating, metal storage products, and made-to-measure furniture. The company has four plants – two in Granby, one in Laval, and one in Sherbrooke – totaling over 400,000 square feet of production capacity, a staff of over 400 employees, three Canadian showrooms (Montreal, Toronto, and Calgary) and a North American distribu-
tion network. Among its many awards and recognition, in 2009 Artopex was named Business of the Year by the Quebec Federation of Chambers of Commerce, and in February 2011, the company was named one of Canada’s 40 Best Managed Companies for the fourth year in a row.

To increase its flexibility and decrease its material handling, Artopex purchased a Prima Power punch/ bender in 2009. “Our goal was to reduce our fabrication cycle by being able to punch and shear parts, then immediately bend the part with the systems and eliminate additional material handling,” explains Pellenzer.

The PSBB cell contains the following equipment:

- Shear Genius punch shearer/combination;
- 2 automated storage tower;
- 2 position loading system;
- Sorting system;
- Stacking robot with direct connection to the EBe automated bender; and,
- EBe Express Bender.

Shear flexibility

With the Shear Genius integrated punch/shear angle combination concept, the objective is to provide one machine capable of transforming a full-sized sheet into punched parts. These parts can be moved to second-
ary operations using the sorting and stacking auto-
mation and then on to bending operations without being touched by human hands. As loading, punching, and shearing of parts become automated, the result is finished parts with a dramatic reduction in scrap and manual labor while increasing profitability.

The Shear Genius eliminates wasteful skeletal and costly secondary operations such as deburring. Nibbled edges on the part exteriors are eliminated through the use of the integrated right angle shears. In fact, the same clamps that hold the sheet for punching also hold it for shearing. In essence, the system allows the automated process to begin with a full-sized sheet of material and end with a punched part after automated loading, punching, forming, stacking, and unloading—all in one operation. This allows true single-space flow to be achieved and maintained with a cus-
tomer’s take-time.

“When we predict that there are no longer skel-

etons or t Gabriel Bouchard, president and chief executive officer of Artopex, examines an end product of the Prima Power laser, which he says has transformed the manufacturing process at the company.

“I was looking to purchase either a prismatic or an automated system,” says Lam. Artopex evaluated this purchase from a cost standpoint, from how we could manufacture our products, and what it would bring us in terms of new ways to design our products. When we looked at the EBe bender, we liked the fact that everything was linked together, and you could start with a full-sized sheet on one end and it came out as a completed part. In the future, this will allow us to move our products more efficiently.”

“When we tested the Prima Power customers that had the bender, we realized that the bender alone was not the complete solution to what we needed,” explains Bergeron. “It was better for us to link the bender to the Shear Genius and sell the C5 Compact Express. The reason for this purchase was both capability and new product development possibilities.”

Prima Power laser

In 2010, Artopex purchased the Prima Power Platino 2D Laser System. The Platino is equipped with lasers developed and produced at Prima Industrie in laser systems ranging from 3,000 to 5,000 W. The laser can be a broad range of materials and thicknesses with speed and precision without the need for manual adjustments.

The system’s laser cutting head gives users a choice of a 10-inch focal length in addition to the standard 5-inch and 7.5-inch lenses. The 10-inch lens enhances the application flexibility by increasing the depth of focus and enlarging the spot diameter for high and uniform cut quality of thick stainless (5/8 in.), thick aluminum (1/2 in.) and thick mild steel (1 in.).

“We purchased the Platino to perform a specific job,” explains Bergeron. “We are bringing all the laser parts to our subcontractor in-house. So we are in the pro-
cess of filling the machine with parts. We can also use the laser for design and concept prototypes. In addition, we have two laminate lines that use a lot of tube. We also want to produce those parts in-house. We were attracted to the rotary axis option for tube cutting on the laser.”

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