

A fixture in fashion

RETAIL FIXTURE

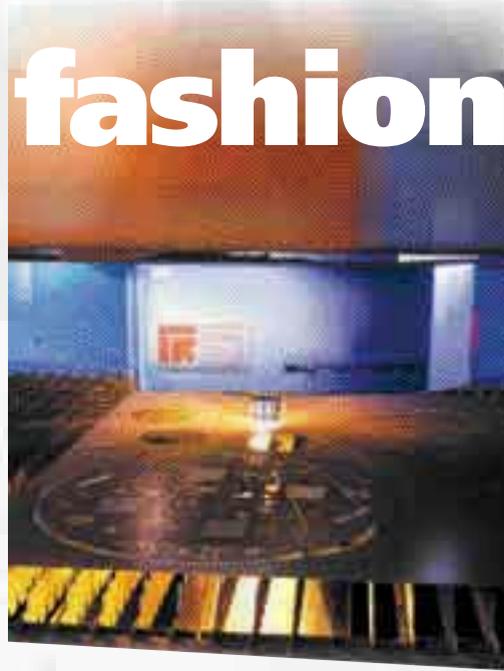
MANUFACTURER

REALIZES HUGE CYCLE

TIME REDUCTIONS

WITH INNOVATIVE LASER

CUTTING SYSTEM



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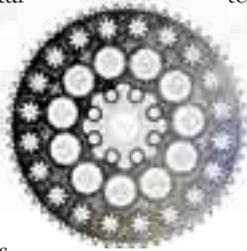
he highly competitive retail environment relies heavily on image and visual marketing appeal. One of the most prestigious manufacturers of store fixtures for retail markets is JP Metal

America in Montreal, which uses laser technology for cutting sheet and metal tubes on such fixtures. Some of the company's high-profile customers include well-heeled names like Harley Davidson, Tommy Hilfiger, Federated Department Stores Group, and Belks Department Stores, among many others.

JP Metal currently uses three 2D flat sheet lasers and three 3D lasers for processing tube products, while four CNC press brakes, one automated sheet bending system, two CNC shears, four robotic welding machines, four automated polishing machines, and one CNC turret punch press round out the balance of its manufacturing arsenal. All this equipment is housed in a 450,000-sq.-ft manufacturing facility that is complemented by 550,000 sq. ft for warehousing and assembly operations, run by more than 600 employees for the entire facility.

With the incredible evolution of the retail environment, image and impression factors make presentation to consumers as important as function is to the retailer. Store fixtures have the power to sell more product, and they demand sophisticated equipment like laser cutters that can produce precise, appealing, quality fixtures. In November 2006, JP Metal acquired such a system—a 2D laser named Sincrono, designed and built by PRIMA Laser—to help meet and exceed manufacturing challenges of its customers.

The addition of this system has enabled the company to manufacture integrated designs in much higher volumes than conventional fabricating equipment. The investment is paying off handsomely through significant production time savings, in addition to giving JP Metal an edge on its industry competition.



“Before JP Metal deployed laser technology, old and heavy punch presses were used for stamping and punching operations,” says Martino Paventi, vice president of operations at JP Metal. “Tool and die makers would have to make molds or dies—a very costly, manual, and time-intensive process that also led to quality problems such as precision loss of alignment in manufacture. The presses were also limited to certain capacities, which were not enough to meet the company's growing demands. By purchasing laser equipment, we saved time, labor, and material waste, but most importantly we realized substantially increased productivity.”

The impact on productivity was immediate with laser equipment. Even though lasers are more expensive than conventional punching equipment, the savings are significant when comparing operating time versus manual labor. Furthermore, when the new system was installed, savings skyrocketed to between 60 and 70 percent on certain parts when compared to conventional lasers, while providing more accurate and cleaner cut pieces.



Synchronized speed saves

When making exotic displays, it's easy to justify laser use. “It's fast,” says Paventi. “So fast you can't even see it cut, plus it cuts very accurate and clean, which all adds up to significant savings.” Normally when speed is increased, there is more dross formation, cuts are less square, and they have a ten-

dency to burr, but, according to Paventi, the new system actually cuts cleaner at high speeds, even in intricate features. Paventi explains, "Since we are in a retail environment, we encounter a lot of slotted, punched parts and ovals etc., some that are small and detailed. Previously, we were making these on turret presses and other equipment, which can jam parts when piercing delicate areas. Synchrono cuts these features more accurately. And I'm talking tiny holes too, only 0.040-in in diameter. It's even more amazing how fast it pierces them."

Paventi gives an example: "When making a 20,000-piece display bracket run, we're seeing some parts that were normally taking 34 seconds that are now being done in 20 seconds or less. In fact, this was the result of a study we conducted, comparing Synchrono to conventional 2D machines when cutting the shelf brackets in 11-gauge mild steel. The study was impressive; we found the Synchrono to be 60–70 percent faster."

Naturally, this time savings translates to money. Paventi further illustrates it this way: "We base our machine running time on what we produce for ourselves. Let's say we're doing a high-quantity fixture run for a retailer and we estimate 200 hours of laser time for one part. We base everything on an hourly rate, for example \$125. So for the sake of example, \$25,000 of time is consumed on this part/operation. If we cut in 70 percent less time, you can easily see how it equates to significant savings." Also, with increased speed, one would assume an increase in gas consumption, however Paventi notes that with his new system consumption was the same as the conventional lasers.

Seve Venditto, a JP Metal programmer, says, "What makes it stand out more than any laser is the unique head design technology. It operates much smoother than a normal laser cutting machine. The head works within its own axis and quicker—it almost floats, with no lurching or banging. The program interface and routines are also easy to use. Our operators have adapted easily to Synchrono, with little training involved and a

fast transition period. After only one and a half days, operators were running programs and cutting parts."

A fashionable future

At the present, the company uses the system for "lights-out" cutting and piercing operations on runs of 5000 to 10,000 parts, made mostly from 11- through 18-gauge sheet steels. In the future, the company plans to use it for more piercing operations in more displays. "We cut various materials from mild steels to stainless. The laser system makes a very clean cut on most metals," explains Ian Cabogreco, a JP Metal operator/programmer. "In stainless steel, it cuts much better than conventional machines, while in thicker materials, as soon as it pierces in LPM (Laser Piercing Monitor) mode, it automatically senses it's through the metal and starts cutting instantly—a big time savings."

Paventi senses that eventually more players in the fabricating industry will be deploying sophisticated laser equipment. He says, "The word is out in the industry that we have this new laser system. We have been getting calls from customers and potential customers on whether it is true that the machine really cuts as fast as it is claimed. The answer is a simple yes!"

For his part now, Paventi says he's totally comfortable with the technology. Still, it's never easy to take the first step. "Synchrono is really a new laser cutting technology, so initially we were a little unsure of making the investment," says Paventi. "But PRIMA is well established and very knowledgeable. We knew they would stand behind it. We have a good relationship with them and Synchrono is our third PRIMA Laser. It's always scary when trying something new, but if you don't try, your competitors will. So we decided to take the leap. So far, it has been profitable and we have never looked back." □

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