

Success Story

Large Format CO₂ Laser Cutting



A unique company located in Redmond, WA, Ennco Display Group specializes in all forms of displays for eye-wear and sunglasses. Their products range from individual retail counter top and wall displays to full-service architectural designs for optical stores. They focus not only on office efficiency and user experience, but also the unique appearance and branding of the space. “We’re very careful not to put ourselves or our customers in a box,” says Bryce Sills, Director of Operations at Ennco, “Even standard offerings get customized regularly.”



Ennco provides a large amount of flexibility in their offerings, including choice of material, color options, and custom shapes—all designed and built at their facility in Redmond, WA. This tailor-made approach can present manufacturing challenges, including processing an assortment of materials, ensuring part-to-part accuracy, and overall process efficiency. Plastics like acrylic (frequently appearing as shelving, display walls, and signage) are especially cumbersome to mechanically process because sheets must first be cut with a router, then edges are flame-polished. Founder and CEO Jan Ennis delivered the solution: “The way we do it is with cutting edge tech.” In this case, a cutting machine powered by an i401 CO₂ laser. Jan continues: “No one else competes in our arena with a 400 W, large format laser.” This system adroitly resolved three major manufacturing concerns:

- Versatility: It operates over a variety of materials
- Accuracy: The fully-automated, digital process ensures precision
- Speed: High laser power increases production speeds while creating perfect edge quality in a single step

The system truly is something special: a gantry mounted Synrad i401 400 W CO2 laser operating over an 80" x 120" bed (2 m x 3 m), including fume extraction and four optional focusing lenses. The system was custom designed to provide the work area Ennco needed and currently processes acrylic, wood laminates, MDF, plywood, and on occasion woven fabric. The most popular application is cutting acrylic (including frosted, clear, and UV printed versions) due to the increased efficiency versus mechanical processes. Ennco also found themselves limited in the amount of detail achievable with a traditional router, seldom creating parts less than six inches in size. The laser system has no such limitation, and because of their proficiency with nesting, setting up drawings to laser process was easy. "If there was one line in the company, it would be before laser and after laser," Bryce says.



Working closely with Novanta Application Engineers, Ennco integrated the Synrad i401 CO2 laser into this unique industrial cutting system. Uninhibited by the limitations of traditional cutting systems, Ennco pioneered game-changing manufacturing techniques, improving efficiency while adding industry-leading flexibility.

Jan predicts that we'll see a few trends: further growth in online retail, a continuation of brick and mortar optical stores, and a more segmented market. "As the population ages, [you] can't prescribe and dispense progressive lenses over the internet. Someone is needed to help prescribe lenses," explains Jan. He points to Warby Parker and Amazon as examples of online retailers who have seen the value in opening brick and mortar stores for their customers. Jan also expects the market to more sharply divide into high end stores providing service-rich options versus more economical optical retailers. Either way, he says retailers want items accessible for the impulse buy, and in the optical field especially, you "can't be a no-touch retailer." This is where Ennco will continue to flourish: leveraging industry expertise, technical aptitude and equipment, and providing the personal touch.

Interested in speaking to one of our knowledgeable representatives?

Americas & Asia Pacific

Novanta Headquarters
Bedford, USA
P +1-781-266-5700
Photonics@Novanta.com

Europe, Middle East, Africa

Novanta Europe GmbH
Wackersdorf, Germany
P +49-9431-7984-0
Milan, Italy
P +39-039-793-710
Photonics@Novanta.com

China

Novanta Sales & Service Center
Shenzhen, China
P +86-755-8280-5395
Suzhou, China
P +86-512-6283-7080
Photonics.China@Novanta.com

Japan

Novanta Service & Sales Office
Tokyo, Japan
P +81-3-5753-2460
Photonics.Japan@Novanta.com