4 Times Faster

The World's Most Productive Fiber Laser

Quick-Way Manufacturing (Euless, Texas) is an ISO 9001: 2008 certified sheet metal fabrication/metal stamping plant that has been in business since 1961. The company has over 50 full time employees and specializes in quick-turn sheet metal parts. With ever-increasing pressure to compete in a world market, Quick-Way turned to Amada. Mike Lund, VP/General Manager reflects on that decision. *"We partnered with Amada to secure the fastest machine on the market and achieve lights-out processing. Quick-Way specializes in materials 10 gauge and thinner. The Fiber laser allows us to cut up to 4 times faster than we've ever cut before!"*

The FOL-AJ is engineered to produce the highest quality parts at unmatched speed while reducing operating costs and environmental waste. This innovative machine is the world's first 4000 W production fiber laser specifically designed for cutting.

Mike Lund, VP/General Manager Quick-Way Manufacturing, Inc.

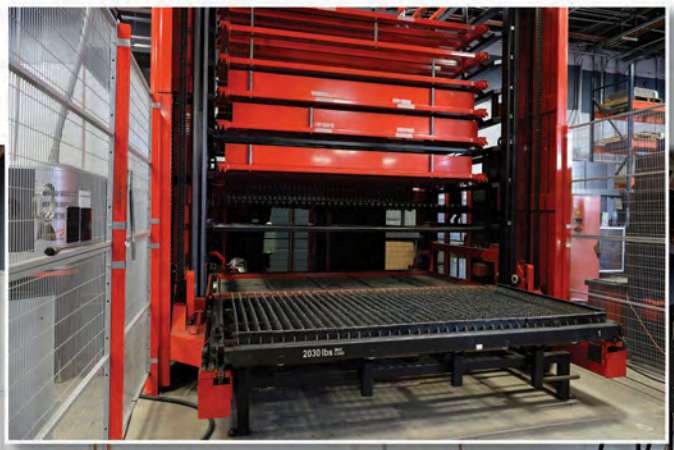
The Laser Source

Amada's innovative, solid-state fiber laser provides one of the many production advantages of this technological advancement. The heart of the system is a resonator which generates a laser beam with a wavelength that is approximately a tenth of that emitted by a conventional gas laser. Now, materials that CO_2 lasers could not process can easily be cut — enabling Quick-Way to expand their process range. In addition, thin gauge materials typically associated with CO_2 lasers can be cut at unprecedented speeds (3 to 5 times faster than a comparable 4000 W CO_2 laser). While the FOL-AJ sets the global standard for cutting thinner materials, it also provides superior speed and edge quality in material thicknesses up to 7/8" compared to other solid-state systems. There are no optics or space inside the cavity of the laser source. Therefore, costs associated with mirrors and downtime for alignment of optics have been eliminated.

Solid-state technology does not require laser gas to generate the laser beam — thereby reducing environmentally harmful emissions. In addition, the power requirements for Amada's FOL-AJ is less than its CO_2 counterpart. Since there are no optics to keep cool, a smaller, more efficient chiller further enhances cost savings. Two to three times more efficient use of electricity, no laser gas and less routine maintenance, all substantially add to Quick-Way's bottom line each month.

Automated Load/Unload

With the dramatic increase in productivity of the fiber laser, material handling is essential to reach full machine potential and achieve lights-out processing. An ASLUL automated material handling system utilizes vertical space, producing floor space savings and superior material management. The ASLUL also ensures that productivity is mathematically predictable by delivering high-speed load/unload and stacking of material. Considering the benefits of automation, Lund states, *"The ASLUL enables us to load several skids of material and let the fiber laser run without supervision. Amada's fiber laser and automated loader combine to increase our capacity while giving us a world-class edge to compete."*



Innovative Linear Motor Drive System

Amada's 3-axis linear motor drive system sets the global standard for speed and precision — enabled by true closed-loop feedback of the head position directly to the AMNC/PC control. Rapid traverse speeds of 13,380"/min. and a 5G acceleration speed for the entire work envelope — provide the high speed required to match the extremely productive capabilities of fiber laser processing. The system's advanced linear drive system also ensures absolute accuracy even at the highest cutting speeds. The FOL-AJ's ability to accelerate and decelerate quickly provides unprecedented processing times along with precise holes and square corners.

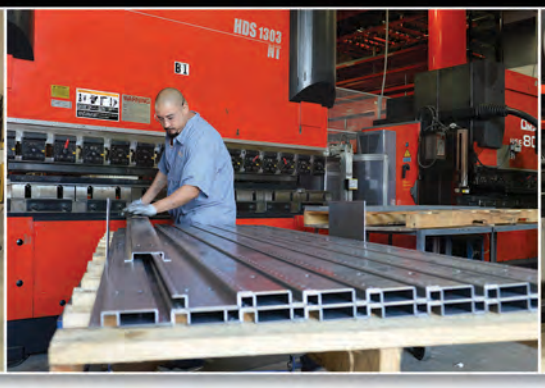
Reflecting on his partnership with Amada, Lund states, *"We choose Amada for their continued efforts to push technology to its limits and for the great support that we continue to receive. We've had Amada punching, bending and laser cutting equipment in our shop for the last 10 years and have never had an issue with service. Quick-Way has seen significant growth during the last 5 years in a very difficult manufacturing market. We attribute much of that growth to having the very best equipment available and having direct access to leading-edge technology. Amada continues to be a vital partner in our success."*

Amada's FOL 3015 AJ Fiber Laser and Advanced Automation Provide:

- **Lights-Out Processing** (Fiber laser technology, high-speed shuttle tables and automation combine to provide unmatched productivity while reducing lead-time and cutting costs).
- **Unmatched Speed, Accuracy, and Edge Quality** (Advanced 3-axis linear drive motion system and an innovative beam delivery system are engineered to keep pace with the cutting speeds and capabilities of the Amada-designed fiber resonator
- **Energy Efficiency** (FOL-AJ consumes approximately 1/3 the amount of energy required by a 4kW CO_2 laser and about 1/4 the amount compared to a 6kW CO_2 laser).
- **Process Range Expansion** (Providing the ability to cut copper, brass and titanium).
- **Maximum Flexibility** (The AMNC/PC control reads ahead 30 blocks of G-code — enabling it to respond quickly and adjust efficiently for high-mix/low-volume production).

Additional Amada equipment that contribute to Quick-Way's ongoing success.

LC 3015 F1 NT — *Featuring a 3-axis linear drive system, no lens change technology plus ultra-fast piercing and cutting, the LC-F1 NT provides exceptional productivity.*



HDS 1303 NT — *An ultra-high precision, down-acting system featuring advanced hydraulics that provide the ultimate in positioning accuracy.*

EMK 3610 NT — *Servo-electric turret punch press that enhances productivity by providing additional functions such as contouring, deburring, slotting, marking and forming.*