

PRESS RELEASE: LATEST AMADA INNOVATIONS TAKE FIBRE LASER QUALITY TO NEW LEVELS

In order to push the quality of fibre laser cutting to new levels, AMADA is releasing two advanced technologies: Silky Cut Fibre and Gas Mixer. Available for the company's ENSIS and LCG (4 kW+) range of fibre laser cutting machines, these breakthrough innovations ensure superior quality in comparison with standard fibre lasers, allowing customers to enter new markets and win new orders.



While the industry's ongoing demand for fibre laser technology has been driven by high process speeds, it is well documented that quality dips below that of CO₂ lasers when working on thicker sheets with certain materials. With this in mind, AMADA's Silky Cut has been developed to offer CO₂-quality stainless steel processing up to 15mm thick using fibre laser technology.

Unique to AMADA, Silky Cut is a combination of the company's own fibre laser source, new cutting head design and optimisation of the beam path optics, as well as advanced understanding of gas-flow dynamics and beam-shaping techniques. Customers can now process mid-to-thick stainless steel with the confidence that it will meet the highest standards. In addition, users processing thicker materials can

now enjoy the reduction in energy consumption associated with fibre laser cutting, which is typically 70% less than an equivalent CO₂ laser. Sectors set to benefit include, oil and gas applications and food industry equipment.

Also unique to AMADA is Gas Mixer, which is designed for CO₂-quality processing of aluminium using a fibre laser technology.

Although near dross-free aluminium fibre laser profiling can be achieved using oxygen as the cutting gas, due to the inability to weld after oxygen cutting, this solution is rarely applicable. As a result, most opt for nitrogen when cutting aluminium, which is fast but exhibits quality that is less than satisfactory in some instances.

Using AMADA's Gas Mixer system, gases are mixed to a proven ratio that allows the perfect combination of improved cut quality and post-cutting weldability. Subsequently, users have the potential to eliminate secondary operations and reduce welding defects in comparison with oxygen-cut parts. Manufacturers working in the automotive, aerospace and general subcontract markets will be among those to benefit most.

Along with Silky Cut and Gas Mixer, customers choosing ENSIS machines will enjoy the additional advantage of original variable beam control technology. ENSIS technology allows high-speed processing of thin materials, high-quality processing of thick mild steel with negligible taper, and high-speed piercing of thick mild steel. Moreover, the 3 kW ENSIS fibre laser can process the same thickness mild steel (25mm) as a standard 6 kW fibre laser, with half the power. The upshot is lower cost-per-part, lower energy bills and greater profit margins. The ENSIS machine has proved particularly popular among sub-contractors, who demand flexibility with reduced process costs.

In summary, while many manufacturers are switching to fibre laser technology to increase profit through faster processing and reduced energy consumption on thin parts, quality can be compromised at the thicker end of the material spectrum. With this in mind, any fabrication or profiling shops faced with processing both thin and thick materials should opt for Silky Cut and Gas Mixer to enjoy benefits across the board. There will no longer be any need to retain a CO₂ laser cutting machine, or compromise on quality.



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