Press Release
Amada UK Ltd

AMADA ENSIS FIBRE LASER CUTTING MACHINES
12 KW POWER ADDED TO AMADA ENSIS FIBRE LASER RANGE

AMADA has released its latest high-power fibre laser cutting machine, the ENSIS-AJ 12 kW, which adds to the currently available 3, 6 and 9 kW versions. The ENSIS fibre lasers are aimed at any manufacturer needing fast piercing and cutting across a wide range of materials. The new 12 kW ENSIS incorporates all the features of the 6 and 9 kW versions, such as AMADA's original Variable Beam Control and Auto Collimation technologies, as well as the in-house designed and developed fibre laser engine. For the 12 kW version, 3 x 4 kW diode modules (the highest power, single module yet produced by AMADA**) are utilised to ensure a very high beam quality is maintained for faster cutting speeds. It also opens new avenues for thicker mild steel processing with nitrogen, up to 15mm. The new ECO WACS system for thick mild steel processing with oxygen further enhances the overall package.**

In recent years, higher power fibre lasers have become more popular for sheet metal processing, providing faster cutting speeds and quicker piercing times, and in turn, lower cost-per-part. The new 12 kW AMADA ENSIS-AJ fibre laser has been specifically developed to enhance the already high performances of the existing 3 – 9 kW versions that are currently available. The 3 kW version was already able to process 25mm mild steel. The 12 kW simply takes this to a new level with the addition of the new ECO WACS function. WACS (Water Assisted Cutting System) has been standard on the fully featured ENSIS-AJ fibre lasers since the original launch in 2014 and allows very high-quality oxygen processing of thick mild steel. ECO Cut was used for lower thickness oxygen processing (10-15mm), for speed increases and running cost reductions. Now, ECO WACS combines both these features to allow very thick mild steel processing with an extremely high edge quality and improved bevel angle, whilst maintaining fast cutting and piercing capabilities.

Higher power also brings the advantage of processing thicker mild steel with nitrogen to give an oxide free cutting edge. The 12 kW ENSIS-AJ can now process up to 15mm mild steel with nitrogen and utilizes AMADA's Clean Fast Cut (CFC) process to increase cutting speeds and reduce gas consumption by up to 70% compared with

standard nitrogen processing. This opens new opportunities for customers in the construction, agricultural and yellow goods markets. These significantly higher cutting speeds compared to oxygen result in quicker deliveries for the end user.

Central to the advanced capability of ENSIS-AJ fibre lasers is AMADA's Variable Beam Control technology, whereby the laser beam mode is automatically adapted to deliver stable cutting across all material types and thicknesses. Variable Beam Control can also change instantly between a high-power density beam for piercing and a high-speed, high-quality beam for cutting, thus reducing cycle time. Regards set-up times, only a single lens is required to process thin-to-thick materials, helping to maximise machine uptime and eliminate costly operator errors.

AMADA's Auto Collimation technology is a further stand-out feature of the higher power ENSIS fibre lasers as it delivers unrivalled beam diameter and focus-point control for the highest cutting speeds and surface quality, reducing the need for secondary finishing operations. Auto Collimation also produces a wider cut kerf on thicker materials, making for easier part removal from the sheet to reduce handling time.

"By combining AMADA's well proven Variable Beam Control technology, which we have used since 2014, our Auto Collimation technology and 12 kW of power, the latest high-power ENSIS model gives new and existing customers a significant advantage in a competitive market," says Matt Wood, Senior Product Manager at AMADA Europe. "In fact, 25mm mild steel can be pierced in as little as 1 second on the 12 kW version, saving significant processing time."

Ease-of-use is facilitated by AMADA's intuitive AMNC 3i controller, while reliable production is assured thanks to functionality such as the 16-station automatic nozzle changer.

There are many automation options available for the ENSIS-AJ machines to help users maximise productivity and save on labour costs. For instance, the ASF-EU / ASLUL tower systems will automatically load and unload sheets, offering a very fast sheet changeover time of less than 90 seconds (for the ASF-EU). Also available is the TK EU part-picking system for the automatic collection, sorting and stacking of laser-cut parts without interrupting the machine. The 2nd Output Station allows operators to unload parts and skeletons from 3 sides of the cutting pallet as well as introducing a 3rd cutting pallet into the system for even greater flexibility and productivity.

For any laser job shop struggling with longer processing times when profiling thick materials on their existing laser, the ENSIS-AJ 12 kW machine provides the solution. Use of this technology will also introduce extremely reliable cutting across a broad range of materials and thicknesses. Last but not least, as AMADA designs and manufactures both the machines and the fibre laser engines, customers can rest assured of class-leading service and support moving forward.

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