

Launches New ENSIS (9kW/6kW) Fiber Laser Machine

- High-speed, excellent stable cutting with evolved ENSIS technology with high-output oscillator —



AMADA CO., LTD. (Isehara in Kanagawa Prefecture; President: Tsutomu Isobe) will launch the **ENSIS-3015AJ (9kW/6kW)** fiber laser machine using its cutting-edge ENSIS-9000 and ENSIS-6000 high-output oscillators on June 1,.

ENSIS-3015AJ (9kW/6kW) is designed for high-speed stable cutting over the entire range of machining, from thin to thick sheet metals, which has been made possible by the evolution of AMADA's original beam control technology (ENSIS technology) and the expansion of oscillator output from the conventional 3kW to 9kW/6kW. Besides, high quality cutting over the thick material range is achieved by overcoming problems related to fiber lasers through reduced dross and bevel, and improved surface roughness.

NC equipment is provided with the AMNC 3i, which can be operated easily like a smartphone. It is adapted to AMADA's IoT V-factory and visualizes machine operating results including power consumption and processing costs, contributing to performance. Furthermore, it enables smart manufacturing through maintenance and support to maximize machine capacity, as well as proposals to improve production efficiency.

AMADA Group's mid-term management plan aims to increase the proportion of fiber laser in the number of laser machines sold to 80%, therefore an important target is to expand sales of fiber laser machines. By expanding the lineup of our ENSIS Series, we propose cutting process solutions that improve productivity and quality based on the higher output of fiber laser machines.

[Main features of **ENSIS-3015AJ (9kW/6kW)**]

1. AMADA's 9kW/6kW high-output oscillator

It is equipped with a cutting-edge high-output fiber laser oscillator with a maximum output of 9kW/6kW to enable high-speed and high-quality cutting over the entire processing range (thin, medium thickness, and thick sheet metals), based on energy saving and high-quality beams. Compared to AMADA's conventional fiber laser machine, processing speed has been increased about 2.4 times*¹⁾.

2. Evolved "ENSIS technology" beam control

ENSIS technology allows laser beam to be controlled freely into the optimum beam form according to material quality and thickness. Additionally, the auto collimation mechanism is provided as a new feature of the technology. The variable range of the condensing diameter has been expanded greatly to achieve excellent stable cutting over the entire thickness range.

Furthermore, combined with a high-output oscillator, the technology enables high-speed stable cutting of thick sheet metals, cutting with reduced dross and bevel (a 83% improvement*¹⁾), and improved surface roughness (a 54% improvement*¹⁾).

3. New machining technology for high speed and low running costs

In addition to the new beam control technology, the fiber laser machine employs Clean Fast Cut (CFC)*²⁾ technology and Easy Fast Cut (EZFC)*²⁾ technology to dramatically reduce the consumption of assist gas during nitrogen cutting, which is used mainly to cut stainless steel. It applies an original non-contact nozzle developed by AMADA that supplies assist gas at a low pressure to reduce processing costs, while maintaining cutting quality.

*1) In case of AJ4kW ratio (mild steel t16 mm)

*2) Patent pending

■ Machine specifications

| Model | | ENSIS-3015AJ | |
|---|-----------------------------|--|------------|
| Oscillator | | ENSIS-9000 | ENSIS-6000 |
| Oscillation method | | LD excitation fiber laser | |
| Rated laser power | W | 9000 | 6000 |
| NC model/Number of axis | | AMNC 3i / X, Y, Z axes + B axis +CT, CU axes | |
| Axis travel distance | mm | 3070 × 1550 × 100 | |
| (X × Y × Z) | | | |
| Rapid feed rate (max. command speed) | X × Y synthesis m/min | 170 | |

| | | | |
|---|-----|---------------------|---------------------|
| Max. sheet thickness | mm | 25 | |
| Max. workpiece mass | kg | 920 | |
| Power requirements (including chiller and dust collector) | kVA | 71 | 56 |
| Machine dimensions (L x W x H) | mm | 10140 x 2860 x 2730 | 10140 x 2860 x 2430 |
| Machine mass | kg | 9200 | 9100 |

Note: The information herein is subject to change without notice.