NEWS RELEASE

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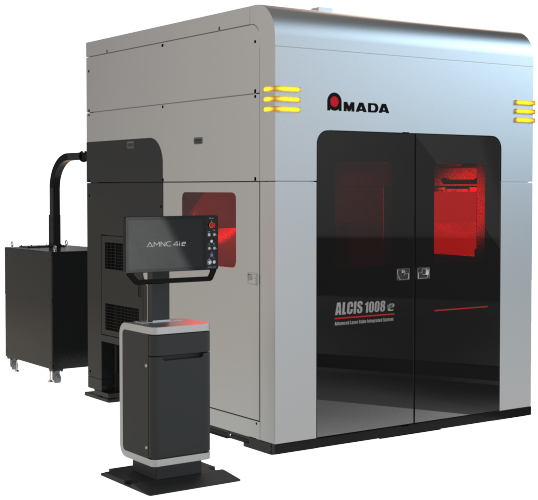
AMADA CO., LTD.

AMADA Announces the Three-Dimensional Laser Integrated System, "ALCIS"

Equipped with a blue laser and fiber laser for
high-speed, high-quality cutting, welding, and layered manufacturing



ALCIS-1008e

On October 4th, AMADA CO., LTD. (Isehara, Kanagawa, Japan, Representative Director, President: Takaaki Yamanashi) announced the three-dimensional laser integrated system, “ALCIS-1008e” at “Photonix 2023.”
This machine will also be exhibited at the “Amada Global Innovation Center” within the AMADA Head Office in Isehara, Kanagawa during November, where AMADA will begin full-scale verification with customers and strive to take on the challenges of future processing technologies.

The "ALCIS (Advanced Laser Cube Integrated System)" is a three-dimensional laser integrated system that can perform various types of laser machining such as cutting, welding, and layered manufacturing, all in one machine. It is equipped with two laser oscillators, for a blue laser and a fiber laser, and can also support the high-speed and high-quality processing of highly reflective materials such as copper, for which demand is increasing. The system realizes high-precision laser machining to meet the needs of highly variable manufacturing.

■ ALCIS-1008e - Key features

1. Equipped with two oscillators for a blue laser and a fiber laser

The system is equipped with a high-power blue laser oscillator of up to 3 kW and a fiber laser oscillator. The blue laser has a shorter wavelength than the fiber laser and has roughly a ten times higher absorption rate for copper, enabling high-speed and high-quality welding. The selection of the most suitable laser according to the material to be processed realizes flexible support not only for copper, which is in high demand due to e-Mobility, but also for other materials and working methods, which are evolving every day.

2. **Torch exchange for a variety of three-dimensional laser machining**
   Since it's easy to exchange the 3D head with a torch suitable for cutting, welding, or layered manufacturing, a variety of three-dimensional laser machining can be realized on a single machine. Additionally, the welding torch can be selected according to the machining application and material, which realizes high-quality and stable processing. Systems with specifications that can be equipped with a scanner head also support welding at higher speeds.

3. **Original sensing technology and system upgrade solutions**
   It is possible to perform off-line programming with the latest CAD/CAM "VPSS4ie." Additionally, the NC equipment is equipped with "AMNC 4ie." The new "AI position correction system" function uses AI and image processing on the workpiece images taken by the camera to detect characteristic shape positions. This function will automatically correct the misalignment of the workpiece to reduce setup.
   Additionally, the laser weld monitor, "MM-L400A (manufactured by AMADA WELD TECH)" senses the light during the processing to enable the measurement, recording, and judgment of weld quality and to secure traceability. The machine is also equipped with a system to monitor the protective glass to aim for zero defects.
   It is easy to switch to a 2-axis positioner table, a flat plate cutting table, and a pipe index, for flexible support of work from solid objects to flat plates and pipes. The flexible design of the partitions on the machine makes it possible to have access from the front and both sides, so a system upgrade for automation is also possible.

In recent years, the growing demand for sustainable products and services, such as e-Mobility, has led to demands for new creativity and new challenges in working methods of manufacturing. AMADA will bring together the new technologies and experience in laser development that it has accumulated over the years to take on the challenge of new manufacturing creation by expanding the use of lasers, not only in sheet metal processing, but also into new application areas.

■ **Machine specifications (Reference specifications exhibited at Photonix 2023)**

Model name			**ALCIS-1008e**
Axial movement distance (X x Y x Z)		mm	1000 x 800 x 500
Axial movement distance (V/U)		deg	±370 / ±135
Rapid feed speed (X, Y, Z axes)		m/min	50
Fiber laser oscillator	Rated output	W	3000
Blue laser oscillator	Rated output	W	3000
NC equipment			AMNC 4ie
Machine dimensions (W x D x H)		mm	2200 x 2535 x 2700

END

* The information in this release is subject to change without notice.