



SOLUTION

EML 2515 AJ

Fiber Laser

ENERGY SAVING, HIGH PRODUCTIVITY
COMBINATION MACHINE



EML 2515 AJ *Fiber Laser*

ENERGY SAVING, HIGH PRODUCTIVITY COMBINATION MACHINE


ALL ELECTRIC PUNCHING SYSTEM WITH IN-HOUSE DEVELOPED FIBRE LASER ENGINE FOR FLEXIBLE, LOW RUNNING COST PRODUCTION

Using AMADA's in-house designed 3kW fibre laser engine and market leading servo electric punching technology, the EML-AJ provides the perfect tool to enhance your productivity. In order to provide the highest levels of operator protection, and to fully comply with CE marking regulations, an innovative table cabin design is utilized. Due to the front open concept, as with all AMADA fibre laser combination machines, a sheet of material can be loaded manually if required without opening the table cabin due to a second origin point in front of the cabin. Tapping stations, auto index stations and slug suction systems all contribute to a compact, highly flexible processing centre.



Photograph may include optional equipment

TYPICAL PROCESSING SAMPLES



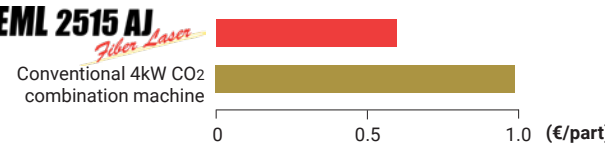
Galvanised steel 1.6mm
200.0mm x 126.0mm

RUNNING COST COMPARISON

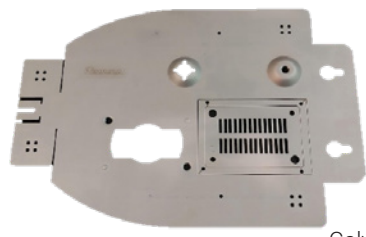
33% COST REDUCTION PER PART vs CO₂ combination machine

EML 2515 AJ
Fiber Laser

Conventional 4kW CO₂ combination machine



Machine	Cost (€/part)
EML 2515 AJ Fiber Laser	0.65
Conventional 4kW CO ₂ combination machine	1.0



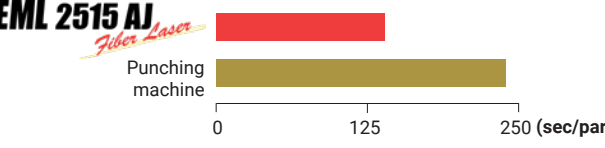
Galvanised steel 1.2mm
223.0mm x 154.0mm

PROCESSING TIME COMPARISON

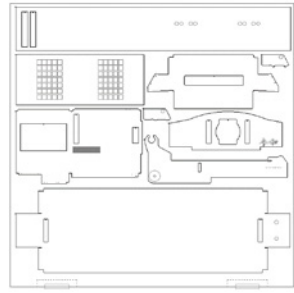
42% TIME REDUCTION PER PART vs punching machine

EML 2515 AJ
Fiber Laser

Punching machine



Machine	Time (sec/part)
EML 2515 AJ Fiber Laser	135
Punching machine	250



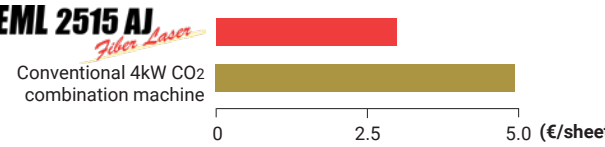
Galvanised steel 1.2mm
1250.0mm x 1250.0mm

RUNNING COST COMPARISON

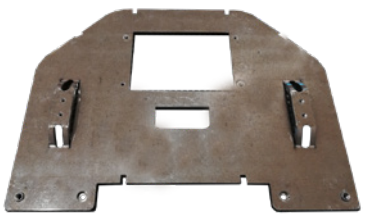
49% COST REDUCTION PER SHEET vs CO₂ combination machine

EML 2515 AJ
Fiber Laser

Conventional 4kW CO₂ combination machine



Machine	Cost (€/sheet)
EML 2515 AJ Fiber Laser	3.0
Conventional 4kW CO ₂ combination machine	5.0



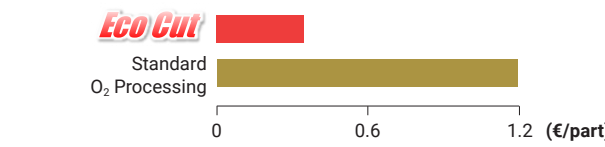
Mild steel 6mm
400.0mm x 300.0mm

ASSIST GAS COST COMPARISON

70% GAS COST REDUCTION PER PART vs standard O₂ processing

Ego Cut

Standard O₂ Processing

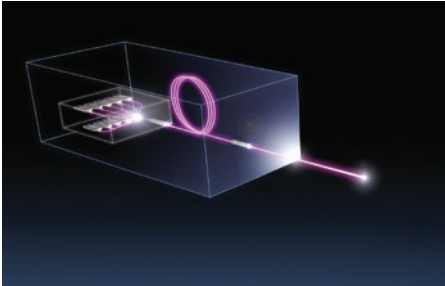


Machine	Cost (€/part)
Ego Cut	0.4
Standard O ₂ Processing	1.2

EML 2515 AJ *Fiber Laser*

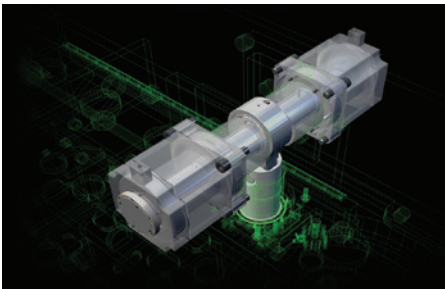
AMADA FIBRE LASER AND ELECTRIC PUNCH TECHNOLOGY

LOW ENERGY CONSUMPTION WITH HIGH PRODUCTIVITY



AMADA FIBRE LASER

The EML-AJ uses a single module 3kW version of AMADA's own in-house designed fibre laser oscillator, which is perfectly suited to the processing of combination parts with very low running costs.



ALL ELECTRIC PUNCHING

The EML-AJ uses twin AC servo motors to generate 30 tons of punching force, allowing a wide range of punched and formed parts to be processed. This system uses up to 70% less electricity compared to hydraulic systems.

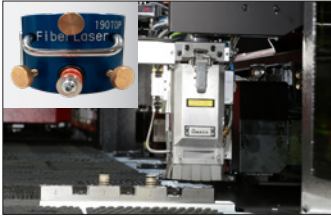
OPTIONAL EQUIPMENT AND FUNCTIONS



AUTOMATED TOOL CHANGING

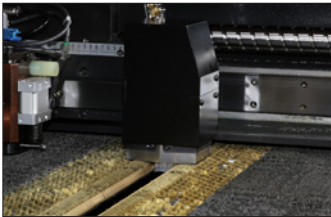
The EML-AJP version includes the new PDC (Punch Die Changer) unit to minimise manual tool loading operations. Up to 220 punches and 440 dies can be stored in the system and all tool sizes can be automatically loaded / unloaded by the robot, including 'E' station tools and forming tools.

STANDARD EQUIPMENT AND FUNCTIONS



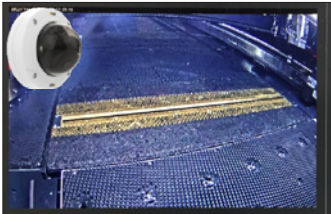
Nozzle Changer / Single Lens

To ensure uptime is maximized, the EML-AJ is equipped with an automatic nozzle changer for fast changeover times. To further maximize productivity, all materials can be cut with a single lens.



Scrap Plate Cleaner

This automatic system quickly and simply removes any dross build-up on the cutting gap plates by utilizing a cleaning brush attached to the end of the X axis carriage.



V-Monitor

Check the real-time machine status remotely on your smart device. Additionally, whenever an alarm occurs, V-Monitor will also record HD video to enable diagnosis of the issue.

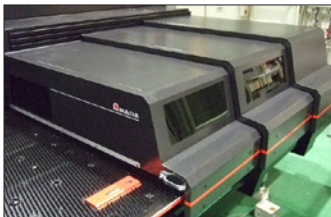
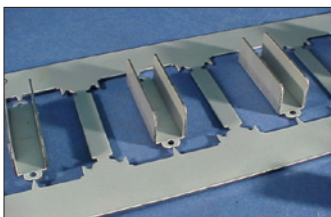


Table Cabin & 2nd Origin

To protect the operator, the unique table cabin solution is used in a closed position when laser processing. If being manually loaded, there is a 2nd origin point outside the cabin to allow easy sheet positioning without having to open the cabin.



Punch & Form (P&F) System

To compliment the already high capabilities of the EML-AJ machine, the P&F system is also included as standard. This consists of a 16 ton forming system which activates the die to allow the processing of forms up to 22mm high.



ID Tooling

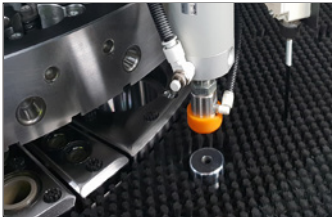
Punches and dies are immediately identified and tracked for number of hits, sharpening amount, and remaining life, helping to minimize set up mistakes. The tool angle and appropriate die selection are also confirmed upon installation.



Compressed Air Cutting

A wide range of materials and thicknesses can be processed with compressed air on the EML-AJ as standard. This drastically reduces the assist gas costs and leads to higher profitability. Cutting speeds are generally the same as with nitrogen.

STANDARD EQUIPMENT AND FUNCTIONS



Punch break detector

The sheet repositioning cylinders are used to blow air through a punched hole to determine if it has been correctly processed or not. A build-up of back pressure indicates the punch could be broken or incorrectly setup. The machine will stop to prevent further issues.



Tapping stations

4 tapping stations are integrated into the turret of the EML-AJ. These allow M2.5 to M8 taps to be utilized in the program. When they are not required for tapping operations, they can be loaded with standard 'B' station tools.



AMADA rapid forming tool (ARFT) compatibility

The EML-AJ is supplied with the ability to support the AMADA Rapid Forming Tools (ARFT) for continuous, quick forming of more complex profiles such as offsets, beading and chamfering.



Z turret

The upper turret is a smaller diameter than the lower turret, which ensures quick and easy manual tool changing on the EML-AJ and facilitates automatic tool changing on the PDC model.



Automatic scrap unloader

Scraps generated by the laser cutting process are automatically removed from the cutting area, providing continuous operation and improving operator efficiency.



AMNC 3i

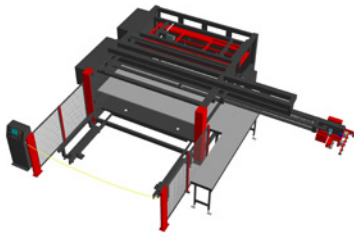
The AMNC 3i numerical control used on the EML-AJ is a 21.5" HD touch screen system that provides simple, intuitive operation for higher productivity.



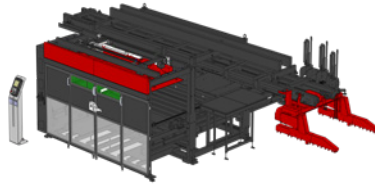
Work chute

The full width, automatic work chute allows parts to be quickly and easily removed from the processing area. A drop miss sensor detects if a part fails to drop correctly to minimise production interruptions.

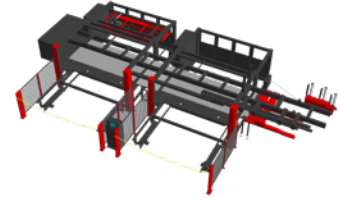
AUTOMATION SYSTEMS



RMP-N
Single pallet L/UL



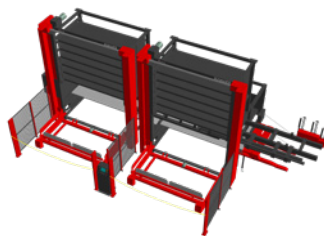
RMP-NTK
Compact single pallet L/UL
+ part removal



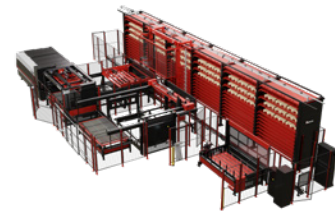
LA-NTK + SR-NTK
Single pallet L/UL + enhanced part removal



ASR-PR
Single tower L/UL
+ part removal



AS-NTK + ULS-NTK
Double tower L/UL
+ enhanced part removal



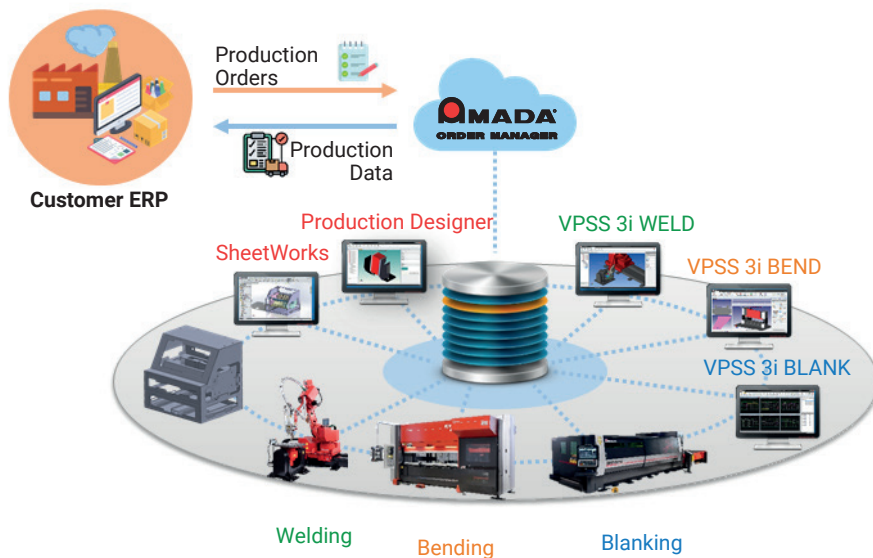
CSII
Multi pallet stockyard system

A BRIDGE BETWEEN ERP AND AMADA ECO-SYSTEM

AMADA Order Manager (AOM) is the new cloud-based platform created by AMADA.

Thanks to the AMADA standard data exchange interface, the customer's existing ERP system can be easily connected to AOM to allow the production data to be sent to the AMADA machines and for collecting the machine production data.

AMADA provides a suite of perfectly integrated software products. Each software technology can take advantage of the VPSS concept (Virtual Prototype Simulation System) to lead to a total, enhanced and error-free production with AMADA machines.



DIMENSIONS

Unit : mm

EML-2515AJ

(L) 5689 x (W) 6927 x (H) 2525

With PDC option:

(L) 6808 x (W) 6927 x (H) 3010



MACHINE SPECIFICATIONS

EML-2515AJ			
Numerical control			AMNC 3i
Combined working range (with reposition) X x Y		mm	3050 x 1525
Maximum material thickness		mm	6.0
Punch	Rapid feed rate X/Y/Z*	m/min	(X) 100 / (YP) 80 / (YL) 100 / (Z) 80
	Press capacity	kN	300
	Press stroke (25.4 mm pitch / 5 mm stroke)	hpm	500
	Tapping (cutting/forming)		MPT Tap
Laser	Oscillator		AMADA-AJ 3kW
	Laser protection		Table cabin
	Accuracy	mm	± 0.07

* Maximum possible combined axis speed


OSCILLATOR SPECIFICATIONS

		AJ-3000
Beam generation		Laser diode-pumped fibre laser
Maximum power	W	3000

PUNCH / DIE CHANGER SPECIFICATIONS

PDC			OPTION
Maximum number of punch tools			220
Maximum number of dies			440
Largest tool diameter	mm		114.3

Specifications, appearance, and equipment are subject to change without notice by reason of improvement.

 For your safe use
Be sure to read the user manual carefully before use.
When using this product, appropriate personal protection equipment must be used.

 Laser class 1 when operated in accordance to EN 60825-1

The official model name of the machines and units described in this catalogue are non-hyphenated like EML2515AJ. Use this registered model names when you contact the authorities for applying for installation, exporting, or financing. The hyphenated spellings like EML-AJ are used in some portions of the catalogue for sake of readability.

Hazard prevention measures are removed in the photos used in this catalogue.

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