SOLUTION

EML 2515 AJ e

ENERGY SAVING, HIGH PRODUCTIVITY
COMBINATION MACHINE

AMADA®

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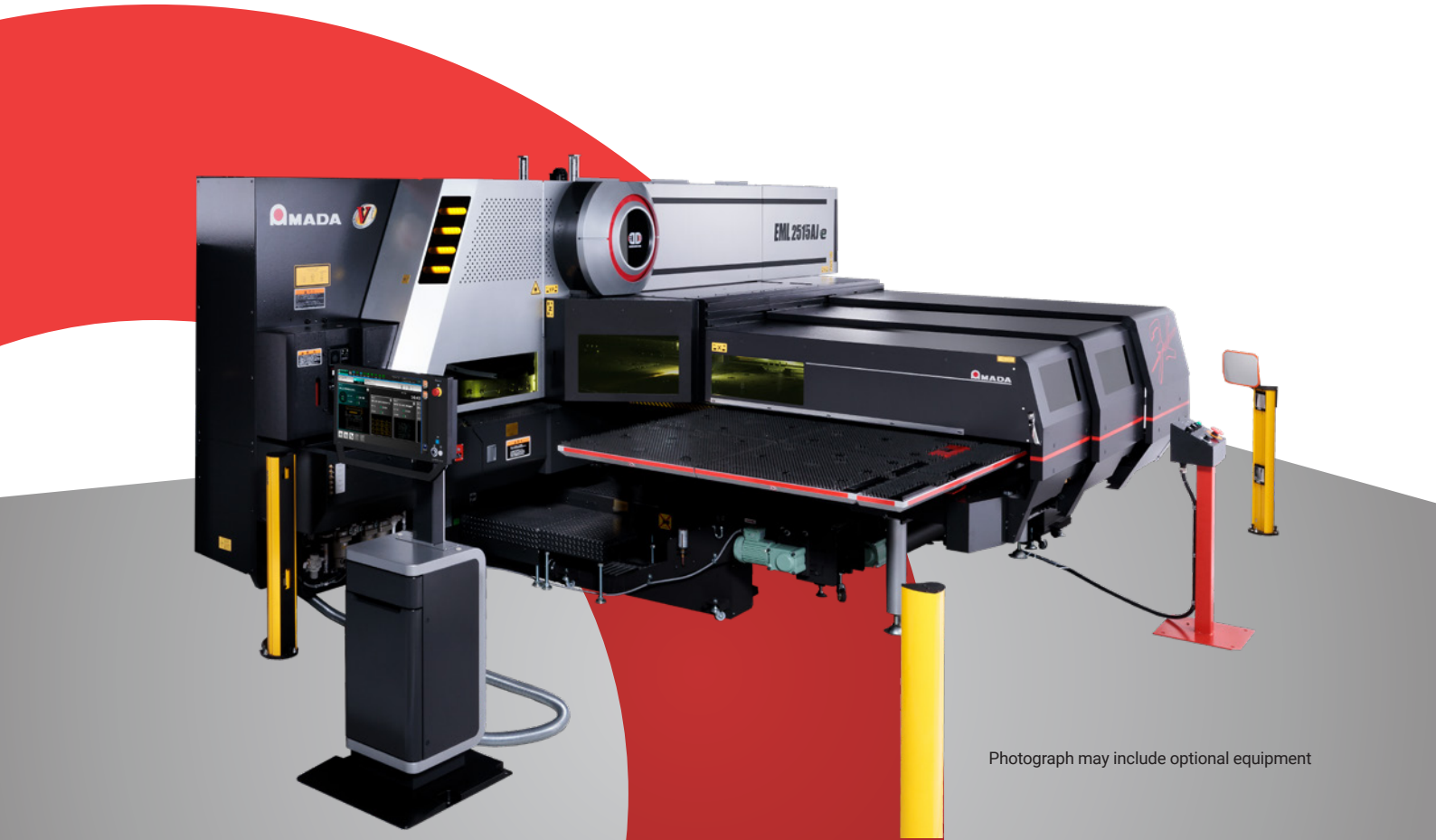
ENERGY SAVING, HIGH PRODUCTIVITY COMBINATION MACHINE

HIGH THROUGHPUT MANUFACTURING CELL

Using AMADA's in-house designed 3kW fibre laser engine and market leading servo electric punching technology, the EML-AJe 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.



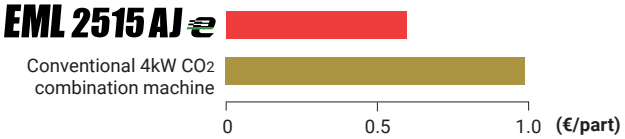
Photograph may include optional equipment

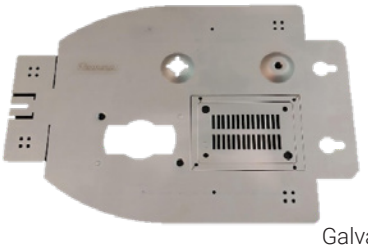
TYPICAL PROCESSING SAMPLES

Galvanised steel 1.6mm
200.0mm x 126.0mm

RUNNING COST COMPARISON

33% COST REDUCTION PER PART vs CO_2 combination machine

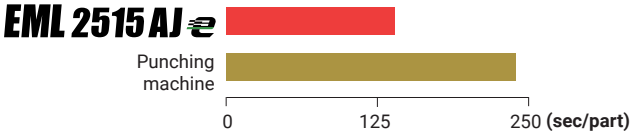


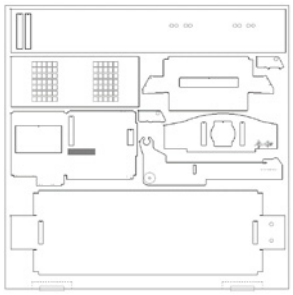


Galvanised steel 1.2mm
223.0mm x 154.0mm

PROCESSING TIME COMPARISON

42% TIME REDUCTION PER PART vs punching machine

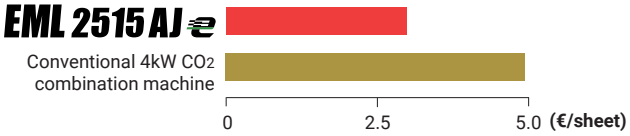


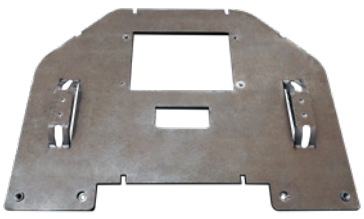


Galvanised steel 1.2mm
1250.0mm x 1250.0mm

RUNNING COST COMPARISON

49% COST REDUCTION PER SHEET vs CO_2 combination machine

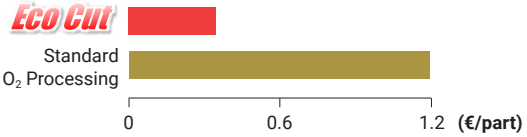




Mild steel 6mm
400.0mm x 300.0mm

ASSIST GAS COST COMPARISON

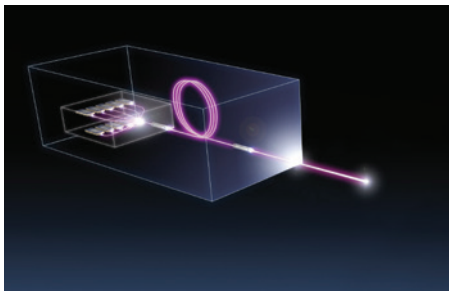
70% GAS COST REDUCTION PER PART vs standard O_2 processing



EML 2515 AJ e

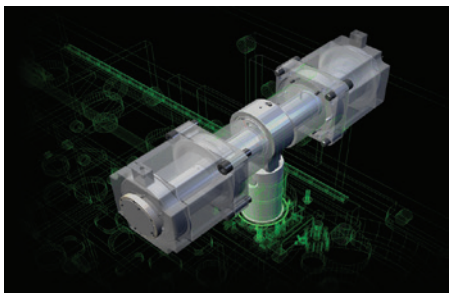
AMADA FIBRE LASER AND ELECTRIC PUNCH TECHNOLOGY

LOW ENERGY CONSUMPTION WITH HIGH PRODUCTIVITY



AMADA FIBRE LASER

The EML-AJe 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

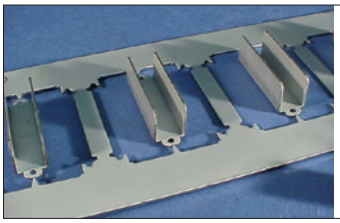
The EML-AJe uses twin AC servo motors to generate 30 tons of punching force, allowing a wide range of punched and formed parts to be processed. This system uses up to 70% less electricity compared to hydraulic systems.

OPTIONAL EQUIPMENT AND FUNCTIONS

AUTOMATED TOOL CHANGING

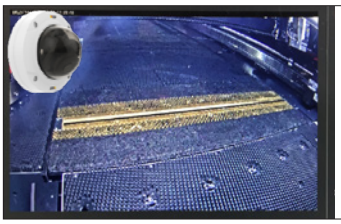
The EML-AJPe version includes the new PDC (Punch Die Changer) unit to minimise manual tool loading operations. Up to 220 punches and 440 dies can be stored in the system and all tool sizes can be automatically loaded / unloaded by the robot, including 'E' station tools and forming tools.

STANDARD EQUIPMENT AND FUNCTIONS



Punch & Form (P&F) System

To compliment the already high capabilities of the EML-AJe 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.



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.

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-AJe as standard. This drastically reduces the assist gas costs and leads to higher profitability. Cutting speeds are generally the same as with nitrogen.

AMNC 4ie

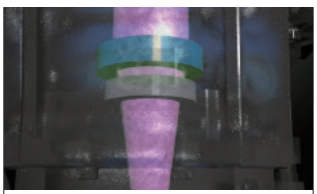
The AMNC 4ie numerical control used on the EML-AJe is a 21.5” HD touch screen system that provides simple, intuitive operation for higher productivity. Facial recognition, service tutorial videos and connection to AMADA's IoT service systems helps increase machine uptime.

LASER INTEGRATION SYSTEM

As standard, the EML-AJe series includes several automatic functions to increase machine autonomy and reduce operator intervention:

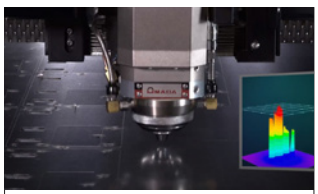
i-Nozzle Checker

Nozzle damage detection + auto centring. Checks nozzle diameter, concentricity and condition.



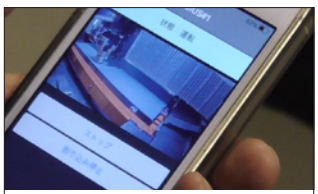
i-Optics Sensor

Protection glass monitoring. Detects abnormalities and informs the operator.



i-Process Monitoring

Pierce and cut failure assistance. Checks all thicknesses of mild/ stainless steel and aluminium.



Mobile HMI

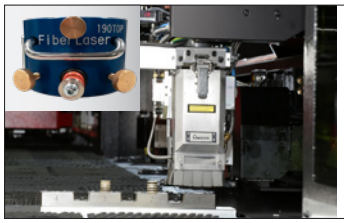
Remotely check schedules and machine history, receive production notifications and see alarm messages.

EML 2515 AJ e

STANDARD EQUIPMENT AND FUNCTIONS

Tapping Stations

4 tapping stations are integrated into the turret of the EML-AJe. 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.

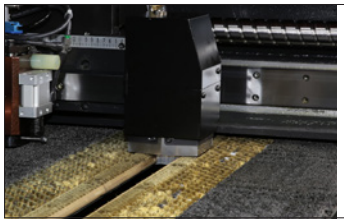


Nozzle Changer / Single Lens

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

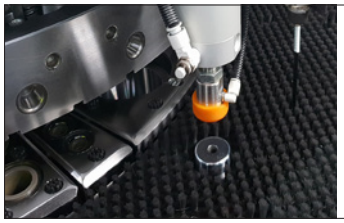
AMADA Rapid Forming Tool (ARFT) Compatibility

The EML-AJe 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.



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.

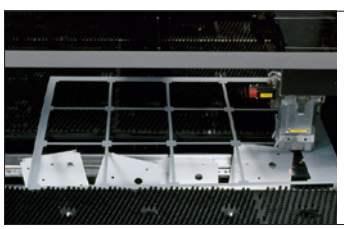


Punch Break Detector

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.

Table Cabin & 2nd Origin

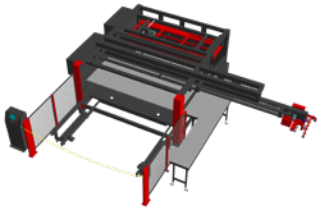
To protect the operator, the unique table cabin solution is used in a closed position when laser processing. If being manually loaded, there is a 2nd origin point outside the cabin to allow easy sheet positioning without having to open the cabin.



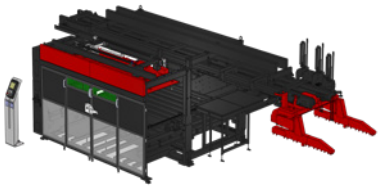
Work Chute

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.

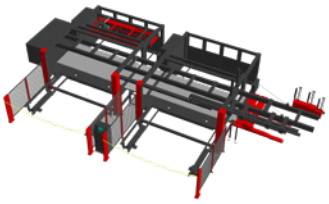
AUTOMATION SYSTEMS



RMP N
Single pallet L/UL

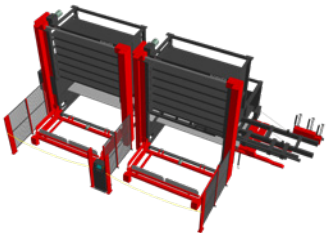


RMP NTK
Compact single pallet L/UL
+ part removal

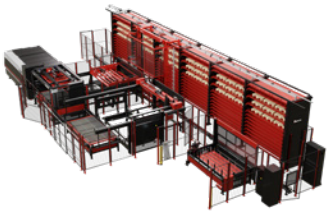


LA NTK + SR NTK
Single pallet L/UL + enhanced part removal

ASR PR
Single tower L/UL
+ part removal



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

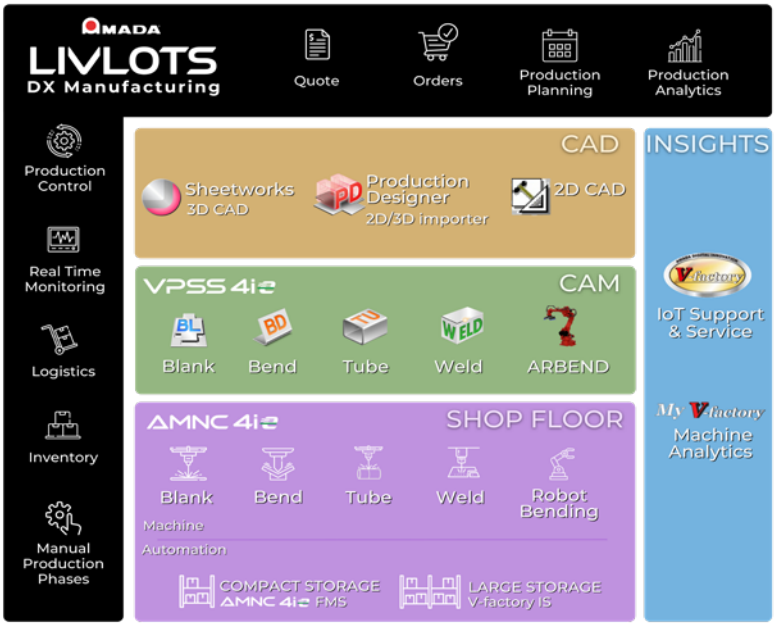


CS II
Multi pallet stockyard system

PRODUCTION PLANNING AND PROACTIVE SERVICE

With the brand-new software solution LIVLOTS (LIve Variable LOT production System), AMADA demonstrates how digital transformation can make production processes more efficient and reliable.

Particularly noteworthy is the deep integration into innovative machine technologies, the VPSS 4ie CAD CAM software solution for virtual prototype manufacturing, complemented by predictive support from technical services, which reduces downtime and increases machine availability.

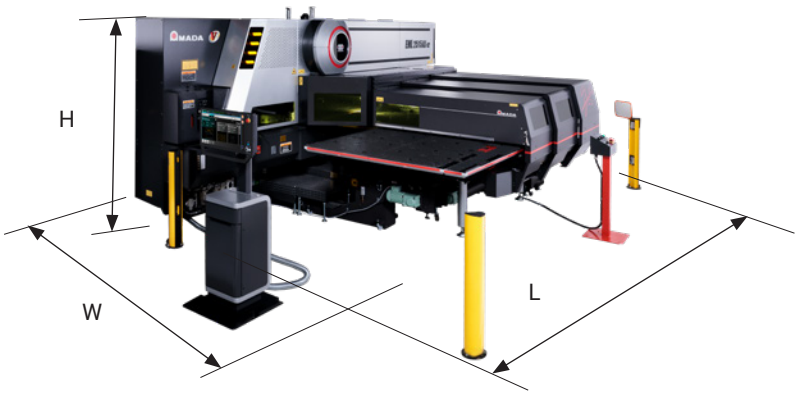


DIMENSIONS

Unit : mm

EML-2515AJe
(L) 5689 x (W) 6927 x (H) 2525

EML-2515AJPe *(with PDC option):*
(L) 6808 x (W) 6927 x (H) 3010



MACHINE SPECIFICATIONS

EML-2515AJe			
Numerical control			AMNC 4ie
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-3000
	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 EML2515AJe. Use this registered model names when you contact the authorities for applying for installation, exporting, or financing. The hyphenated spellings like EML-AJe 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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