



SOLUTION

LC 2515 **C1AJ** *Fiber Laser*

ENERGY SAVING
FIBRE LASER COMBINATION MACHINE



ENERGY SAVING, HIGH PRODUCTIVITY COMBINATION MACHINE

LOW ENERGY CONSUMPTION AND LOWER COST PER PART ACHIEVED THROUGH EFFICIENT PROCESS INTEGRATION

Using AMADA's in-house designed 3kW fibre laser engine and market leading servo electric punching technology, the LC-2515C1AJ 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

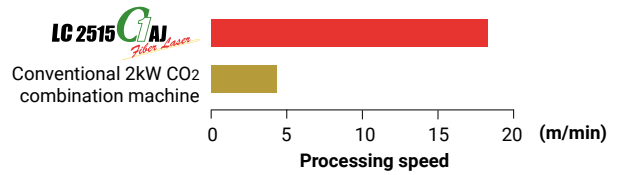


Galvanised steel 0.8 mm
100.0 x 47.0 mm

- Number of tools used: 5
- Number of punching hits: 19
- Number of tapping hits: 2

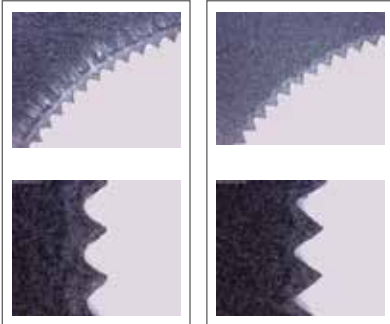
PRODUCTIVITY COMPARISON

27% TIME REDUCTION



CO₂ laser

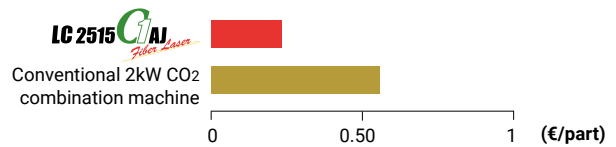
Fibre laser



Fibre laser processing reduces the melt effect on coated surfaces and cut edges

RUNNING COST COMPARISON

56% COST REDUCTION PER PART



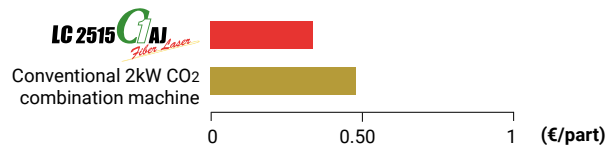
Mild steel 6.0 mm
Ø52 mm

- Number of tools used: 9
- Number of punching hits: 485 (including 461 center punching hits)
- Number of tapping hits: 12

* Marking produced with center punch tooling

RUNNING COST COMPARISON

25% COST REDUCTION PER PART



Copper

Brass

Aluminium

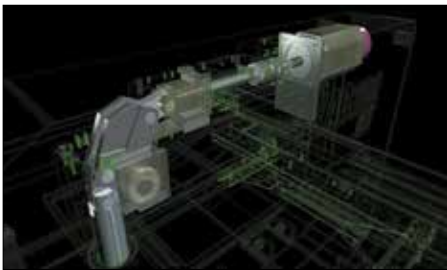
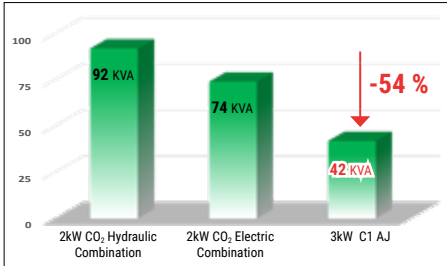


The LC-2515 C1 AJ can cut highly reflective materials that are difficult to cut with a CO₂ laser.

MAXIMUM MATERIAL THICKNESSES

	LC 2515 C1 AJ (3 kW) Fiber Laser	Conventional 2 kW CO ₂ combination machine
Aluminium	6 mm	6 mm
Brass	6 mm	
Copper	6 mm	

HIGH PRODUCTIVITY, ENERGY-SAVING PROCESSING ENERGY CONSERVATION AND COST REDUCTION



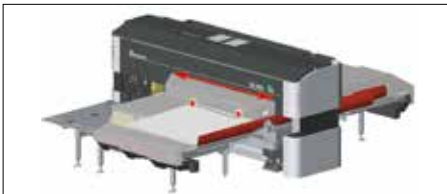
SERVO DRIVE MECHANISM

1st paragraph removed

AMADA's fibre laser has a higher energy conversion and 3 times higher energy efficiency than a CO₂ laser. Power consumption of the oscillator is also substantially reduced. There is no need for warm-up operations or laser gas, providing a running cost saving of at least 70%.

The LC-2515C1AJ is also equipped with a highly energy efficient 20T AC servo press drive providing energy recovery features to reduce the overall power requirements. This means the LC-2515C1AJ requires less power than a hydraulically driven punch machine.

SAFE OPERATION AND EASY MATERIAL LOADING NO COMPROMISE ON SAFETY



INNOVATIVE, UNIQUE TABLE CABIN AND SHUTTER DESIGN

The hybrid type sheet movement of AMADA combination machines, where the material moves in the X-axis only during laser cutting while the laser head moves in the Y-axis, allows a space saving table cabin design to be utilised.

SECONDARY X GAUGE POSITION

This simple but effective system means the operator does not need to open the table cabin when manually loading a sheet of material.

PROCESS INTEGRATION AND STABLE PROCESSING INNOVATIONS FOR ENHANCED TOOL PROCESSING



MPT TAPPING TOOLS (TAPPING STATIONS)

The Multi Purpose Turret installed in the LC-2515C1AJ contains 4 tapping stations, allowing integration of punching and tapping operations traditionally processed separately. Overall processing and programming times are therefore reduced as a result.

AUTO INDEX STATIONS

The Auto-Index System enables punching at any angle with a single tool, thus eliminating the need for special key angle tooling. When combined with special shaped tooling, the Auto-Index System becomes even more productive and flexible.

FUNCTIONS AND OPTIONAL EQUIPMENT



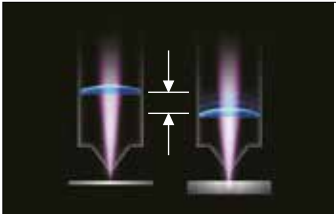
Floating brush table

After down forming, the brush table around the turret raises to lift the material clear of the die before moving to the next position.



Prevention of tool setup mistakes

The tool identification is marked on each individual tool so each one can be digitally managed. When a tool is installed, the machine automatically checks the ID to ensure the correct tool is used..



Motorised Auto Focus Control System

The optimum focal point is automatically set from the cutting database to suit each material. A constant focus is maintained, ensuring optimum laser beam quality and reduced assist gas costs.



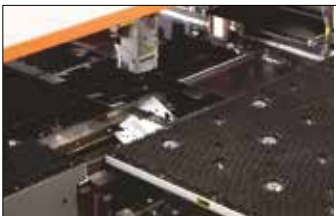
Punch Break Detector

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.



'One Touch' Lens and Nozzle Exchange

To allow faster machine setup, the cutting head on the LC-2515C1AJ is equipped with simple, quick change lens and nozzle cartridges.



Work Chute

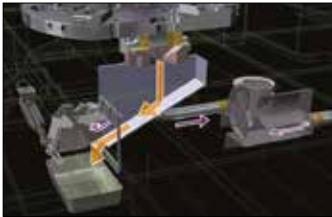
A large 400 x 1525 mm work chute is configured into the machine to enable highly efficient, microjoint-free processing.



Cutting Lenses

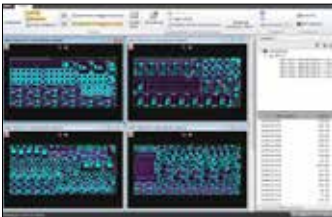
The LC-2515C1AJ is supplied with 2 cutting lenses as standard (including lens holder):
-190 mm lens assembly
-190 mm (AX) lens assembly

FUNCTIONS AND OPTIONAL EQUIPMENT



Slug Pull Prevention System

The LC-2515C1AJ has a vacuum slug suction unit design which prevents even large diameter slug pulling.



CAD/CAM

This fully automatic CAM system nests all the user defined parts and quantities, applies punch tooling/laser profiles, defines the processing sequence and generates the NC program. Increase productivity for your punch, laser or combination machines.



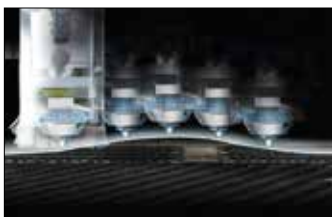
AMNC 3i

The LC-2515C1AJ is equipped with the AMNC 3i and a new touch screen interface providing comfortable operation and impressive ergonomics. It enables simple, intuitive ease of use and fits perfectly into the VPSS 3i digital suite concept.



High density brush bed

In order to reduce scratching of the underside of the material, the LC-2515C1AJ is supplied with a high density brush bed capable of supporting 6mm thick material.



HS Capacitance Head

In order to ensure reliable processing, the LC-2515C1AJ is equipped with AMADA's latest HS capacitance sensing head. This smoothly and quickly follows the sheet profile to maintain a consistent cut even when the sheet is not 100% flat.



Large Capacity, Versatile Turret

Including the 4 station tapping unit, the LC-2515C1AJ has a large capacity, 46 (4 Auto Index) station turret designed to allow flexibility in the manufacturing process. Option: 49 (1 Auto Index, 3 Die Lift-Up) station turret with die lifter stations.



Bar Code Reader

The LC-2515C1AJ is equipped with a bar code reader to allow reliable recall of programming data on the shop floor. By scanning the setup sheet from the CAM system, the operator ensures the correct, latest version of the program is loaded into the machine control.

AUTOMATION OPTIONS



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



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

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

LC-2515C1AJ
(L) 6420 x (W) 6927 x (H) 2377



* Without safety equipments

MACHINE SPECIFICATIONS

LC-2515C1AJ			
Numerical Control			AMNC 3i
Punching force		kN	200
Drive system			AC servo drive
Turret	Number of stations		46 MPT (4 Auto Index) Opt. 49 MPT (1 Auto Index, 3 Die Lift Up)
Controlled axes (simultaneously)	Laser		X, Y, Z, CF
	Punch		X, Y, A
Axis travel distance	X x Y	mm	3050 x 1525
Maximum simultaneous feed rate*	Punch, X/Y	m/min	128
	Laser, X/Y	m/min	128
Maximum punching hit rate	5 mm stroke / 25.4 mm pitch	hpm	370
Positioning accuracy		mm	±0.07
Combined working range (with reposition) X x Y		mm	3050 x 1525
Maximum sheet thickness (for punching)		mm	6
Maximum material mass		kg	220
Work chute size	X x Y	mm	400 x 1525
Machine mass		kg	20000

* Maximum possible combined axis speed

OSCILLATOR SPECIFICATIONS

		AJ-3000	
Beam generation			Laser diode-pumped fibre laser
Maximum power		W	3000
Wavelength		µm	1.08
Maximum processing thickness*	Mild steel	mm	6
	Stainless steel		6
	Aluminium		6
	Brass		6
	Copper		6

* Maximum value depends on material quality and environmental conditions

AJ-2000 + Titanium removed

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 LC2515C1AJ. Use this registered model names when you contact the authorities for applying for installation, exporting, or financing.
The hyphenated spellings like LC-2515 C1 AJ are used in some portions of the catalogue for sake of readability. This also applies to other machines.
Hazard prevention measures are removed in the photos used in this catalogue.

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