

SOLUTION

COMBINATION



ACIES AJ SERIES



INTEGRATED SOLUTION FIBRE LASER COMBINATION MACHINE



MADA

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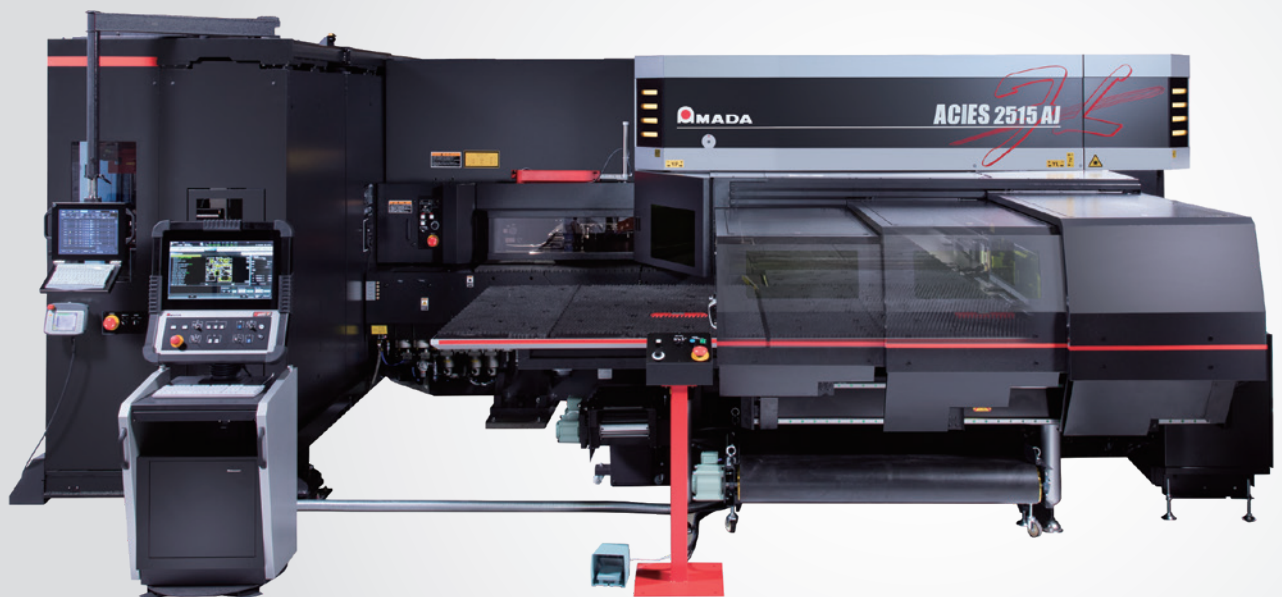
HIGH-SPEED, LOW RUNNING COST PROCESSING

A FURTHER EVOLUTION OF THE ACIES SERIES.

Now available with AMADA's own fibre laser engine, the ACIES-AJ is a further enhancement to the ACIES series of punch/laser combination machines which are ideal for variable-mix, variable-volume production and very high quality processing.

The extra benefits of the ACIES-AJ are the lower running costs and higher processing speeds compared to CO₂ systems.

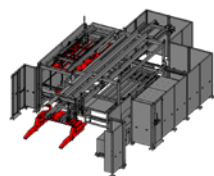
The laser cutting area is enclosed by a table cabin and a shutter to ensure safety. Various automaton options allow for continuous operation for up to 72 hours without interruption.



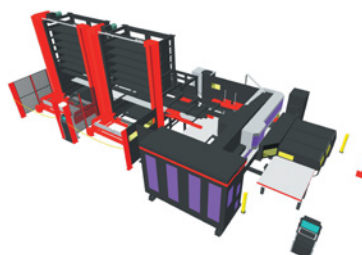
Photograph may include optional equipment

AUTOMATION SOLUTIONS

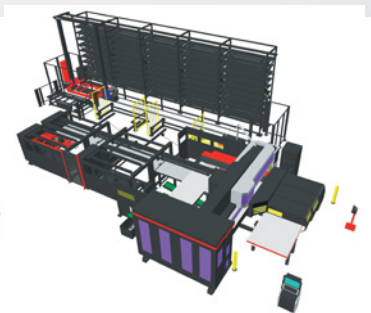
An automatic feeder and the take-out loader free the operator from material feeding, part separation, and part sorting, and allow for long continuous operation. The parts can be immediately supplied to the next process to shorten the total lead time.



Compact
(Single pallet load/unload)



Material and part storage towers
(Two-storage tower specification)



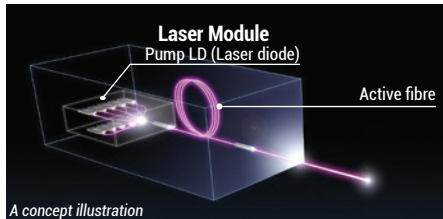
Automated storage and retrieval system specification

ADDITIONAL FEATURES (COMPARED TO ACIES CO₂ MACHINE)

1 PERFECT INTEGRATION

AMADA MANUFACTURED FIBRE LASER

AMADA was the world's first laser manufacturer to develop its own fibre laser oscillator. Using high power, single diode modules to create a very high quality laser beam means higher cutting speeds and more productivity.



In order to enhance the production of fibre laser engines at AMADA's Fujinomiya facility, clean rooms have been created specifically for manufacturing, assembly and testing operations.



2 A SAFE AND SPACE SAVING DESIGN

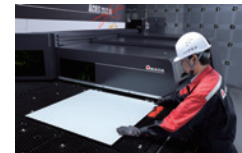
TABLE CABIN

The laser head moves in the Y-axis and the material moves only in the X-axis during laser cutting. The processing area is enclosed with a table cabin and a shutter to completely prevent the laser beam from escaping outside. As compared with a fully enclosed machine, this solution saves on space and ensures the safety of the operator.



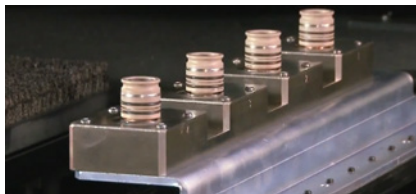
SETTING SECOND ORIGIN

The second origin can be used to set the material without opening and closing the table cabin. This provides similar operation to that of a conventional combination machine.



3 CONTINUOUS MANUFACTURING

AUTOMATIC NOZZLE CHANGER



In order to provide full processing capabilities and maximum up-time of the machine, the ACIES-AJ is equipped with a 4 station automatic nozzle changer. This system not only changes the nozzle, but cleans it and calibrates the cutting head each time a change takes place to ensure consistent, reliable, long term production.

4 EASY OPERATION

AMNC 3i

The AMNC 3i has a large screen with good visibility and can be intuitively operated like a smartphone. The touch screen allows changing of processing conditions, shelf operation with the NC unit, and check of operating results.

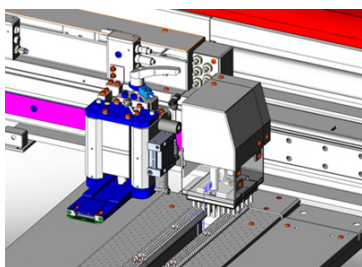


Intelligent
Interactive
Integrated



5 HIGH QUALITY PROCESSING

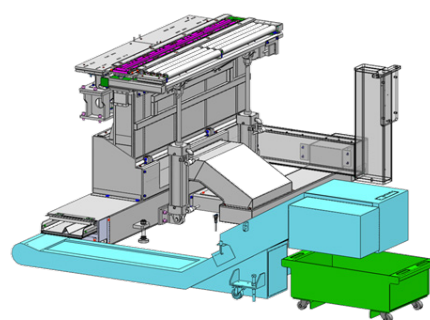
AUTOMATIC CUTTING PLATE CLEANER



One of the main benefits of the ACIES series combination machines is the ability to provide scratch free processing of the under side of the material. In keeping with this benefit, an automatic cutting plate cleaner is utilised to remove any small traces of cutting residue from the cutting area and eliminate possible scratching defects.

6 LESS INTERRUPTION

AUTOMATIC SCRAP REMOVER



Removal of scrap is a key element in any fully automated system. Interrupting the cell to remove scrap reduces overall productivity. The automatic scrap remover on the ACIES-AJ constantly moves the scrap from the waste chute to a container for easy removal and non-stop operation.

DIMENSIONS

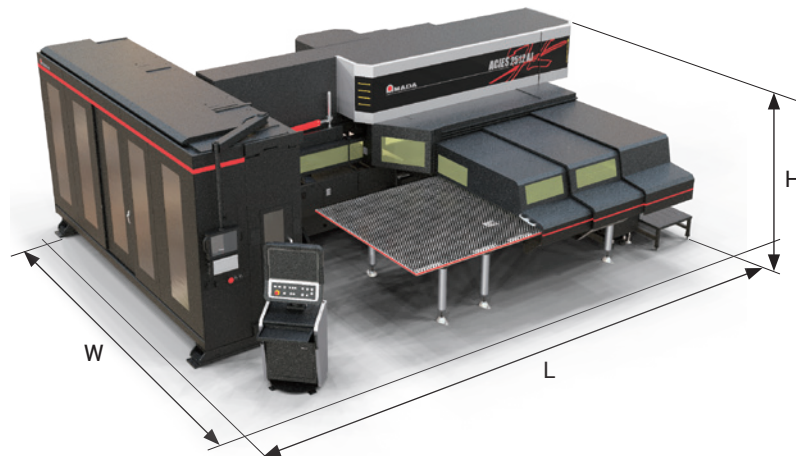
Unit : mm

ACIES-2515T-AJ

(L) 7090 x (W) 6927 x (H) 2666

ACIES-2515B-AJ

(L) 6242 x (W) 6927 x (H) 2524



*This illustration is tool storage unit specification.

MACHINE SPECIFICATIONS

ACIES-AJ			
Numerical Control			AMNC 3i
Punching force		kN	300
Drive system			AC servo direct twin drive
Turret	Number of stations		32
Tool storage unit (TSU)			179 or 300
Controlled axes (simultaneously)	Laser		X axis material travel, Y axis laser head travel
	Punch		X - Y axis material travel
Axis travel distance	X x Y	mm	3050 x 1875
Maximum simultaneous feed rate*	Punch, X/Y	m/min	128
	Laser, X/Y	m/min	141
Maximum punching hit rate	5 mm stroke / 25.4 mm pitch	hpm	430
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 (depending on features)		kg	26000-30000

* 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
	Titanium		5

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



For Your Safe Use

Be sure to read the operator's 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 machinisis ACIES-AJ. Use this registered model names when you contact the authorities for applying for installation, exporting, or financing.

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

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