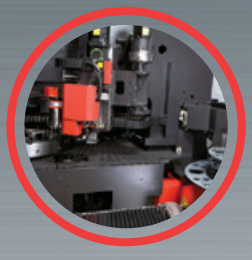
SOLUTION

COMBINATION

ACIES SERIES

INTEGRATED BLANKING PROCESS SOLUTION



AMADA

ACIES SERIES

INTEGRATED BLANKING PROCESS SOLUTION

40 YEARS OF PUNCH PRESS INNOVATION

PERFECT FOR ALL PRODUCTION REQUIREMENTS AND CONTINUOUS OPERATION

AMADA has developed the ACIES, the integrated blanking process solution. The ACIES is a fully automatic punch and laser combination machine that can run automatically and continuously by quickly creating processing data for very small lots or new products and greatly reducing setup time.

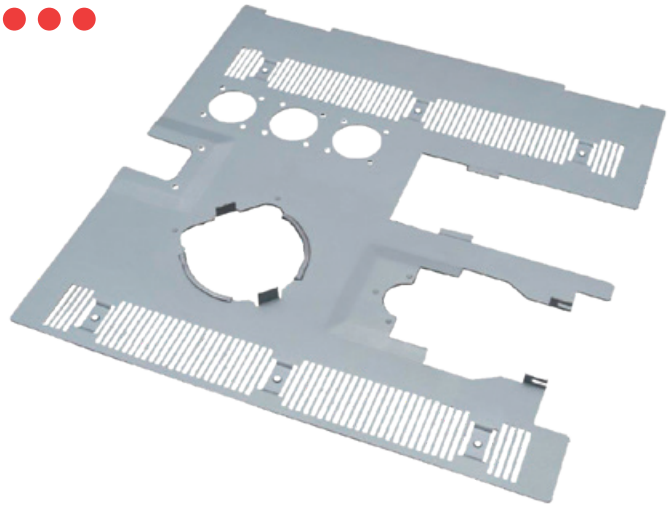
Building on our experience of the last 40 years of punch press innovation, the ACIES is equipped with the next generation, fully covered ZR turret* to enable high speed, high quality production of formed parts without scratching.

The intelligent ID tooling concept ensures the correct tools are used to prevent processing defects.

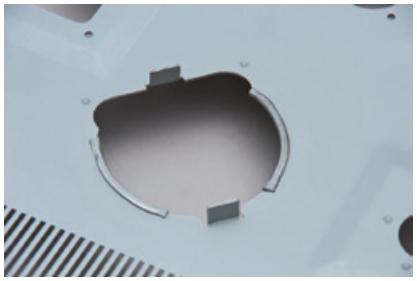
As with all AMADA punching technology, the drive system is all electric, providing much lower power consumtion compared to traditional hydraulic punching systems.

*Z type retractable turret

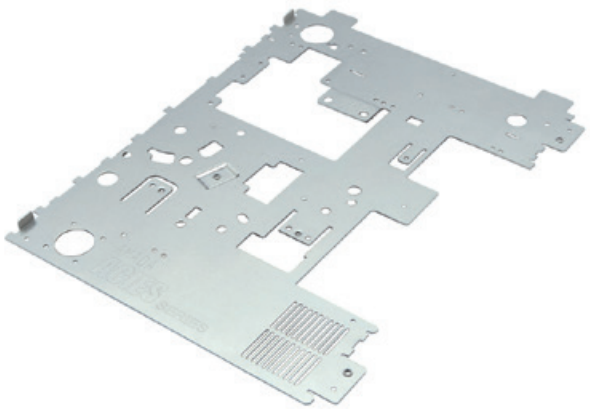
TYPICAL PROCESSING SAMPLES



Material: Electrogalvanised steel, 1.0 mm
Dimension: 300.0 x 300.0 mm

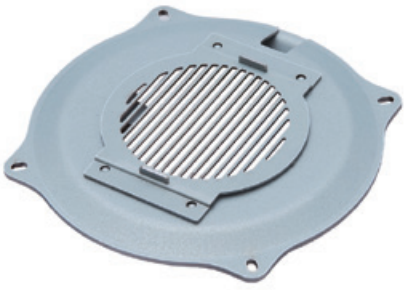


PROCESSING TIME



Material: Electrogalvanised steel, 1.0 mm
Dimension: 200.0 × 260.0 mm

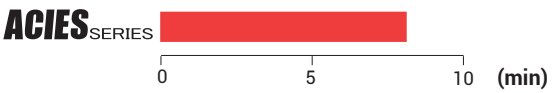
Comprised of three parts



Material: Electrogalvanised steel, 1.0 mm
Dimension: 100.0 × 100.0 mm

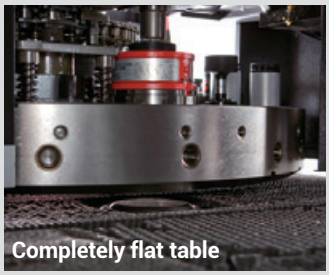
PROCESSING TIME

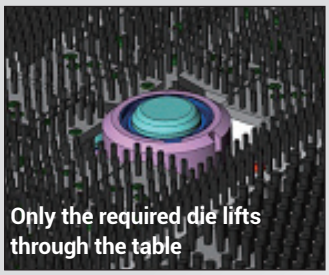
PROCESSING TIME

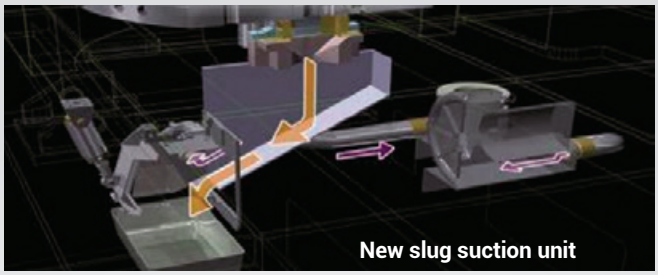


HIGH QUALITY, HIGH SPEED PROCESSING

HIGH SPEED PROCESSING OF FORMED PARTS WITHOUT SCRATCHING THE UNDERSIDE


Completely flat table


Only the required die lifts through the table


New slug suction unit

High speed processing with a scratch free underside

AMADA's continuous development of the turret punch press has led to the elimination of marking of the underside of the material by the die. The lower turret of the ACIES is completely covered by the brush table.
Up/down forming, high extruded forms and scratch free processing are all possible as only the required die is lifted through the brush bed.

Highly efficient slug pull prevention system for all stations

The ACIES has a brand new slug suction unit design which prevents slug pull through the combination of 3 controllable stages at each turret station.

Easy programming

A new track structure eliminates the restrictions on tool location. When tools are specified, the optimum tool arrangement is automatically created by reference to their ID. This eases programming and improves material utilization.

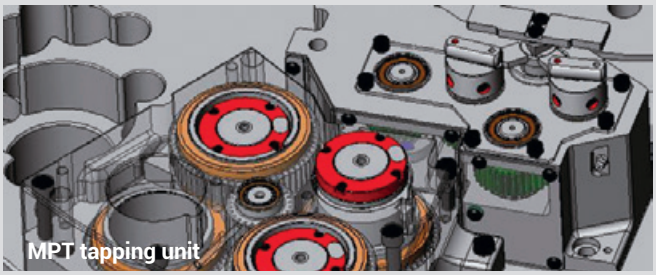
CONTINUOUS PROCESSING

SETUP OF TOOLS DURING PROCESSING AND MAXIMIZED MACHINE UPTIME

ID tools

Stable high quality processing. Prevention of tool setup mistakes with ID tools

Tools are managed digitally according to their individual ID. The ACIES not only reduces tool setup mistakes and tool maintenance time, but also automatically adjusts the die height to take regrinding into account.


MPT tapping unit

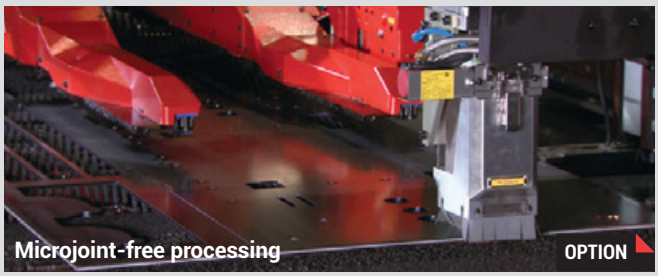
Automatic change of tapping tools, from M2.5 to M8 (seven sizes)

Four types of tapping tools can be automatically changed to increase the number of parts that can be tapped on the ACIES. When a tapping tool reaches the preset number of hits, it is automatically changed for a spare. This allows for continuous operation.


Automatic tool changer system

Tool setup while machine is running

The ACIES series can change tools while processing. An automatic tool changer system prepares tools in the buffer turret while the machine is punching and automatically changes the tools in the turret while laser processing. The availability of the machine can be maximized as a result.

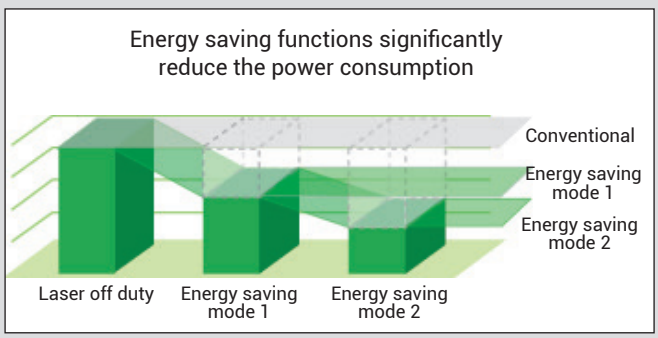

Microjoint-free processing OPTION

Elimination of part separation and sorting

Completed parts can be selected and sorted depending on part types. The parts are automatically stacked by an optional take-out loader system to free the operator from time consuming part separation and sorting tasks.

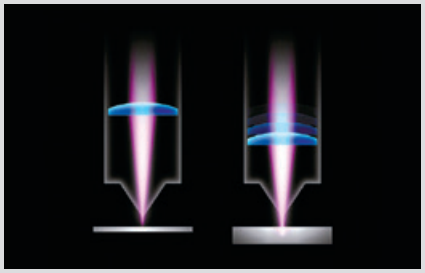
ENERGY SAVINGS

MULTIPLE POWER REDUCTION MODES WHILE IDLING



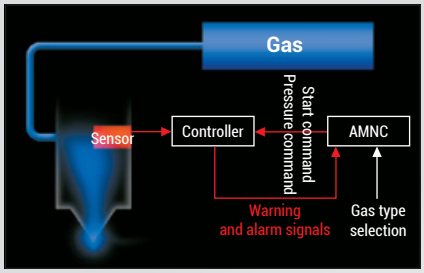
The ACIES-2515 is equipped as standard with a system to dramatically reduce the laser oscillator power required in 2 stages when the machine is punching.

FUNCTIONS AND OPTIONAL EQUIPMENT



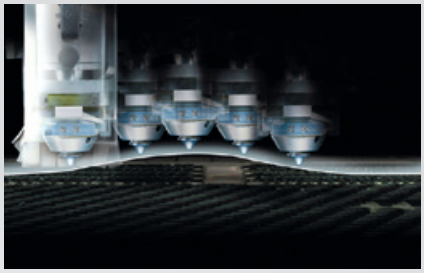
NC auto focus control system

The optimum focal point is stored in a database and automatically set to suit any material. This assures the optimum laser beam quality and saves assist gas cost.



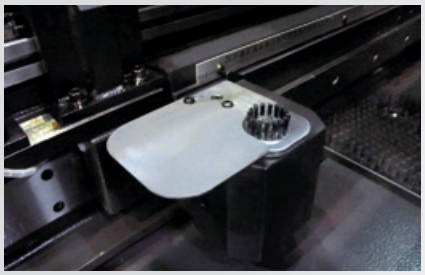
High pressure NC assist gas control system

The assist gas selection and pressure is automatically controlled by the NC to suit specific materials. The system is adapted to the processing of various material types and thicknesses.



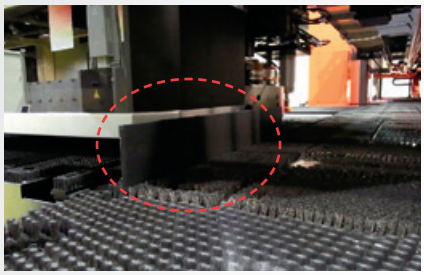
Non-contact Z-axis sensor

The sensor is constructed to reduce the effect of plasma and adopts a high frequency (MHz) band that is less susceptible to the effect of noise, which maintains the gap between the material and laser head during high speed processing for stable cutting.



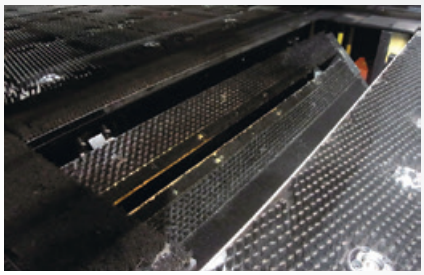
Nozzle cleaner

Automatically cleans the nozzle to remove any spatter and debris, increasing processing reliability. The system can also be set to clean the nozzle at regular intervals during processing.



Spatter guard

The automatic spatter guard raises when processing switches from punching to laser cutting to prevent spatter contaminating the turret area.



Work chute

Large 400 x 1525 mm work chute enables highly efficient, microjoint free processing.

LINEUP

ACIES-T

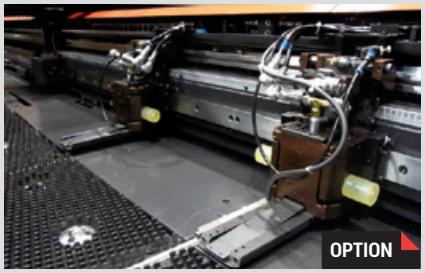
ACIES + tool storage specification
ACIES with tool storage (TSU) (up to 300 tools)

ACIES-B

ACIES + buffer turret specification
ACIES with buffer turret (for buffer turret model)

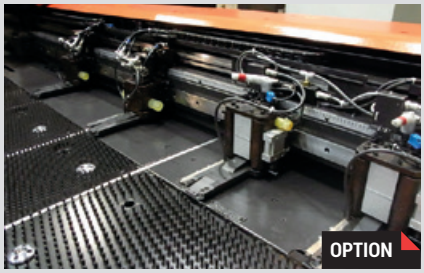
Manual Clamp (three-clamp standard specification)

The ACIES is equipped as standard with 3 manual clamps capable of processing materials up to 6 mm thick.



Clamp positioner (two-clamp specification)

Automatically positions the workclamps as programmed. Material thickness should be 3.2 mm or less.



Stationary fixed clamps + clamp positioner (four-clamp specification)

Clamps 1 and 2: L clamps (manual) (Maximum setting value: 530 mm)

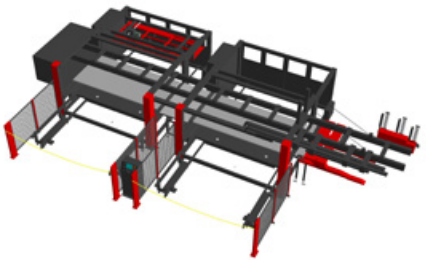
Clamps 3 and 4: Clamp positioner

AMNC 3i

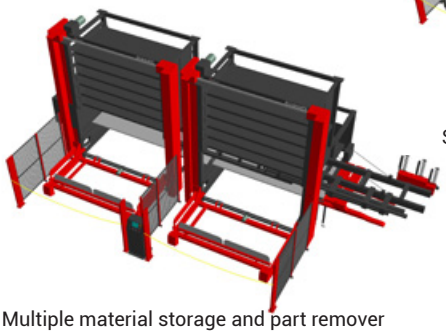
The ACIES is equipped with the AMNC 3i and a new touch screen interface providing comfortable operation and impressive ergonomics. It enables simple, intuitive ease of use and fits perfectly into the VPSS 3i digital suite concept.

AUTOMATION

AMADA offers a wide range of modular automation covering all customer needs.



Single pallet load/unload with part remover



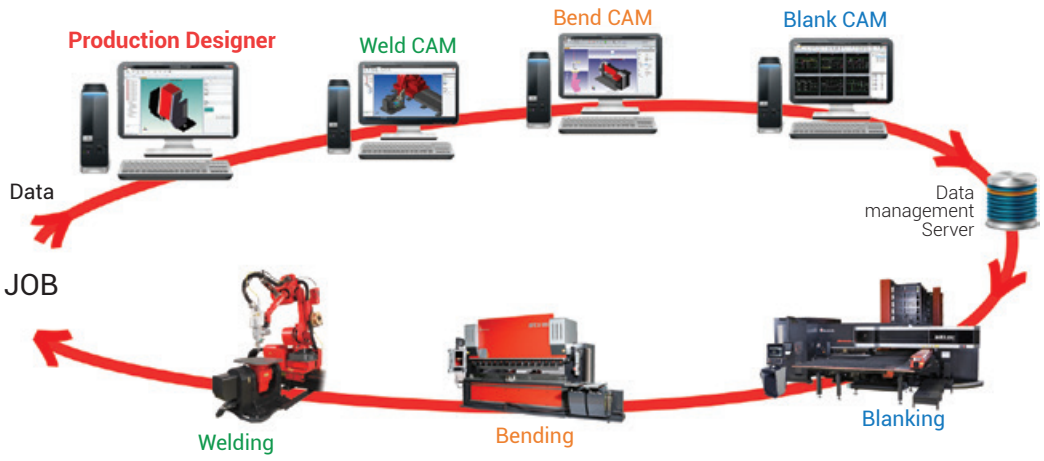
Multiple material storage and part remover

OPTION

THE SHEET METAL DIGITAL FACTORY

AMADA proposes digital manufacturing using VPSS (Virtual Prototype Simulation System).

All data is created in the office and utilised in the workshop via a network.



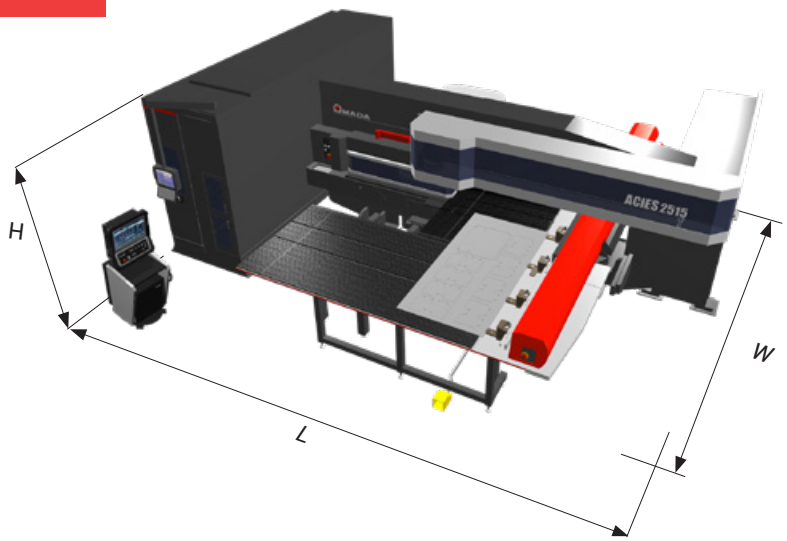
ACIES SERIES

MACHINE DIMENSIONS*

Unit : mm

ACIES-2515T
(L) 7975 x (W) 5970 x (H) 2666

ACIES-2515B
(L) 6942 x (W) 5970 x (H) 2524



(*) without safety equipments

MACHINES SPECIFICATIONS

Models			ACIES-2515
Numerical Control			AMNC 3i
Punching force		kN	300
Drive system			AC servo, direct twin drive
Turret	Number of stations		32 (4 auto index)
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	400
Punching accuracy		mm	±0.1
Work range without reposition	Punch, X x Y	mm	3050 x 1525
	Laser, X x Y	mm	2500 x 1525
	Combined, X x Y	mm	2500 x 1525
Maximum sheet thickness (for punching)		mm	6
Maximum material mass		kg	150
Work chute size	X x Y	mm	400 x 1525
Machine mass		kg	30000

* Maximum possible combined axis speed

LASER SOURCE SPECIFICATIONS

AF4000i-C			
Beam generation	HF electric discharge excitation, high speed axial flow CO_2 laser		
Maximum power		W	4000
Maximum processing thickness	Mild steel Stainless steel Aluminium	mm	6 6 6

Specifications, appearance and equipment are subject to change without notice by reason of improvement.
Scratch free operation dependant on environmental and machine conditions.

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 machinesis ACIES. 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.

AMADA UK LTD.
Spennells Valley Road,
Kidderminster,
Worcestershire DY10 1XS
United Kingdom
Tel: +44 (0)1562 749500
Fax: +44 (0)1562 749510
www.AMADA.co.uk

AMADA SA
Paris Nord II
96, avenue de la Pyramide
93290 Tremblay en France
France
Tél : +33 (0)149903000
Fax : +33 (0)149903199
www.AMADA.fr

AMADA GmbH
AMADA Allee 1
42781 Haan
Germany
Tel: +49 (0)2104 2126-0
Fax: +49 (0)2104 2126-999
www.AMADA.de

AMADA ITALIA S.r.l.
Via AMADA I., 1/3
29010 Pontenure (PC)
Italia
Tel: +39 (0)523-872111
Fax: +39 (0)523-872101
www.AMADA.it