

SOLUTION

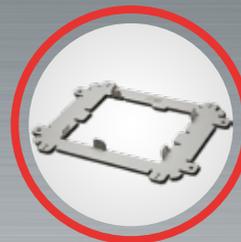
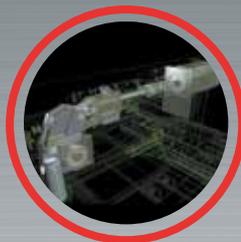
PUNCHING



AE^{NT} SERIES



SINGLE AC SERVO-DRIVE TURRET PUNCH PRESSES



AMADA

AE^{NT} SERIES

SINGLE AC SERVO-DRIVE TURRET PUNCH PRESSES

COMPACT, ECO-FRIENDLY AND INTELLIGENT NEW TURRET PUNCH PRESS

AMADA have installed over 30,000 turret punch presses across the world. The AE-NT series builds on our knowledge and experience, combining AMADA's original, highly rigid 'bridge frame' construction, a single AC servo motor punch action, small footprint and large capacity turret. These factors ensure stable, high speed, high quality processing of the most demanding production. Many process integration functions and an environmentally driven design provide a very cost efficient performance.



Photograph may include optional equipment

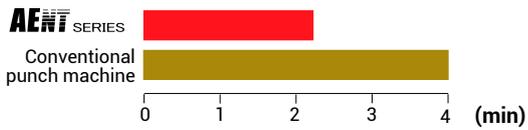
TYPICAL PROCESSING SAMPLES



Material: SUS 1.2 mm
Dimension: 839 x 835 mm

PROCESSING TIME COMPARISON

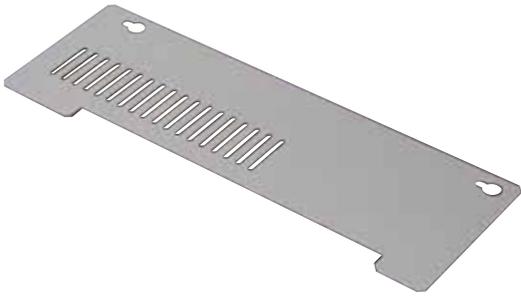
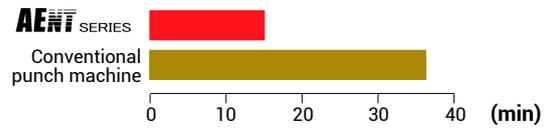
40% TIME REDUCTION



Material: SECC 1.0 mm
Dimension: 905 x 905 mm

PROCESSING TIME COMPARISON

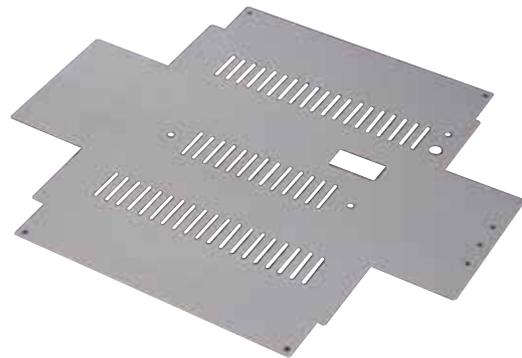
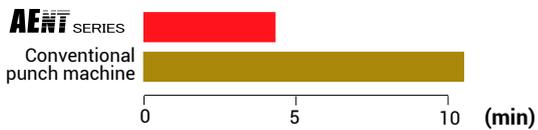
58% TIME REDUCTION



Material: SECC 1.6 mm
Dimension: 274 x 94.6 mm

PROCESSING TIME COMPARISON

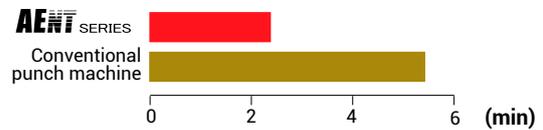
58% TIME REDUCTION



Material: SECC 1.0 mm
Dimension: 333.4 x 392.3 mm

PROCESSING TIME COMPARISON

53% TIME REDUCTION



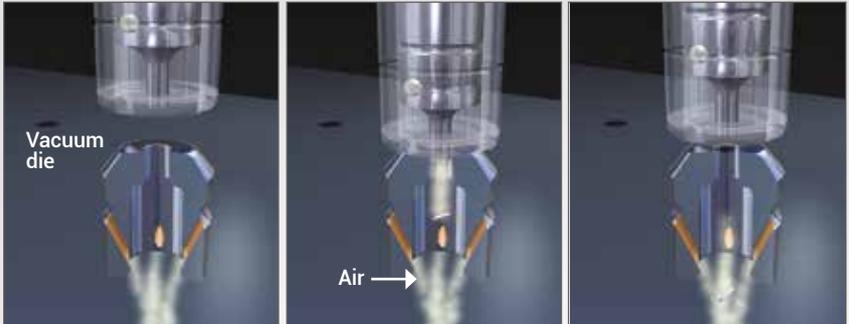
ACHIEVEMENT OF STABLE, HIGH SPEED PROCESSING

POWER VACUUM SYSTEM

Stable, high speed processing achieved by reduced slug-pull

The Power Vacuum system creates an area of lower pressure below the small station dies to 'suck' the slug away from the processing area. This also allows for a smaller punch penetration into the die (typically 1mm), resulting in higher speed processing. This function is also provided to the larger stations by the Slug Suction Unit.

Power Vacuum system

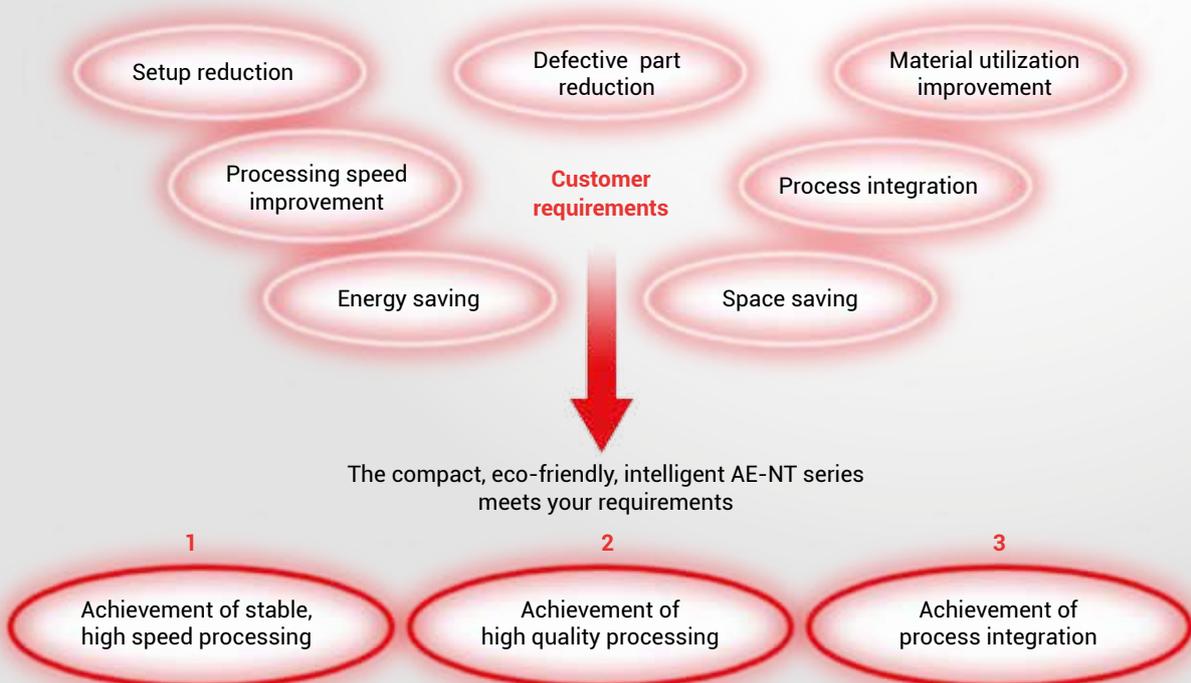
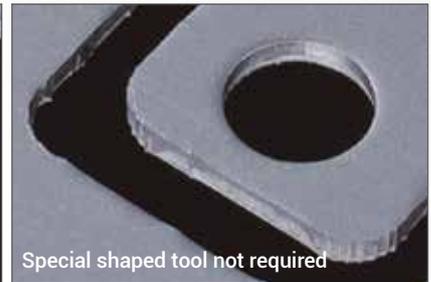


The Power Vacuum system sucks the slug down through the die due to the low pressure created below the slug.

FINE CONTOURING

Special profiles can now be processed with a high quality finish without the need for special shaped tools

Traditionally, it was not possible to use a nibbling pitch smaller than the material thickness. This is now achievable using the Fine Contouring tool. The need for secondary processes is eliminated and process time is dramatically reduced despite the increase in the number of hits.



ACHIEVEMENT OF HIGH QUALITY PROCESSING

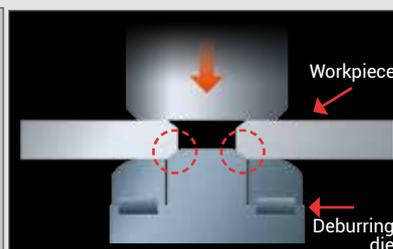
HIGH SPEED DEBURRING

Time saving, in-cycle operation

After the slitting operation, the underside of the work piece is chamfered using a specific die to eliminate time consuming secondary processes and extra handling. Deburring tools can be manufactured to match the width of your slitting tool.



Deburring tool (10 x 10 mm SQ)



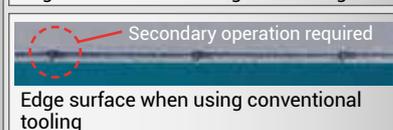
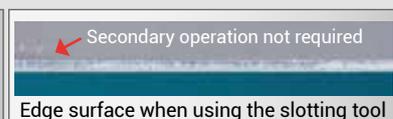
SLOTTING

The removal of overlap marks, eliminating any remedial work

The slotting tool can produce overlap mark-free edges at any angle when installed in a 2" auto-index station.



2" Slotting Tool III



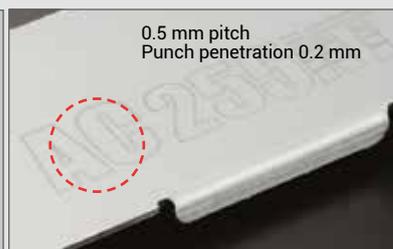
HIGH SPEED MARKING

Improve overall production efficiency when secondary operations are required

Part names, numbers, bend lines, weld positions and other important information can be quickly marked on the part at 900 hits/min to make any secondary operations more efficient.



Marking tool (downward type)



ACHIEVEMENT OF PROCESS INTEGRATION

HIGH SPEED FORMING

Special forms can be produced as part of the punching process

Forms such as offset bends and extrusions, which are usually separate processes, can be quickly integrated at any angle when used in conjunction with an auto-index station.



Offset bending tools



DOWNWARD FORMING

Parts can be formed at high speed without damage or scratching

To avoid damage to down forms, such as burring and tapping, the floating brush table lifts the material away from the die before it is moved to the next punching position.



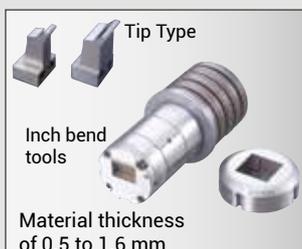
Tapping tools



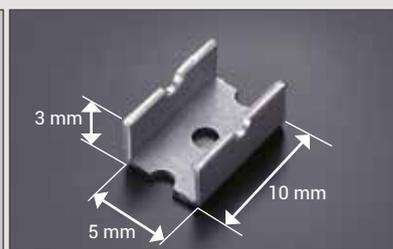
SAFETY INCH BENDING

Small flanges can be processed in-cycle

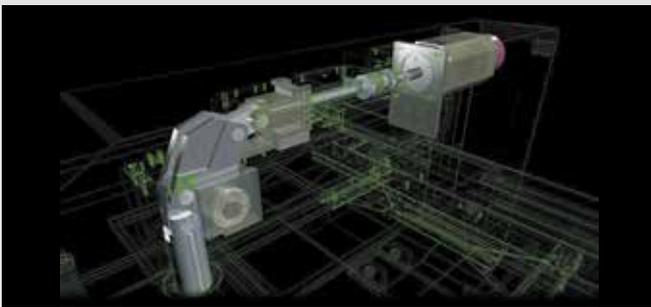
Small or rounded flanges that are traditionally difficult to gauge on a press brake can be incorporated into the punching process.



Material thickness of 0.5 to 1.6 mm

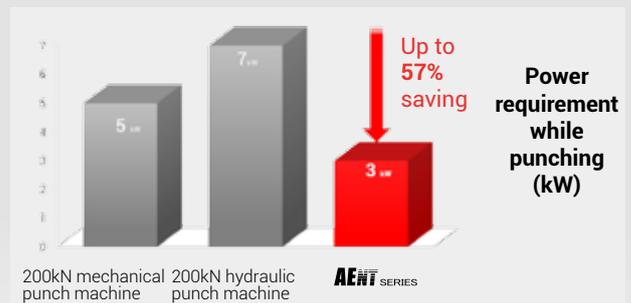


FUNCTIONS AND OPTIONAL EQUIPMENT



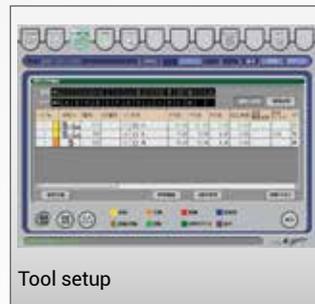
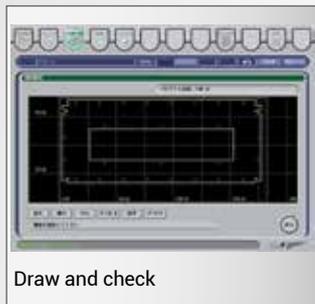
Drive mechanism

The AE-NT series uses a single AC servo motor system capable of achieving a hit rate of 900 hits/min. The press drive mechanism, which is housed within the bridge frame, uses a highly durable ball screw and link combination that ensures stable, high speed processing with high productivity.



Ecology

The AE-NT series consumes as little as 3kW of power while punching and has extremely low standby power requirements. Other environmental considerations, such as the elimination of hydraulic oil (and subsequently its disposal), add to the AE-NT's benefits.



Intelligence

The network ready AMNC/PC control system provides built-in intelligence for many aspects of the machine operation. Tooling setup, program editing and highly accurate press control solutions improve functionality and performance. Other features, such as tonnage monitoring, keep the machine operating at its full potential.

LINE UP



AE-2510NT



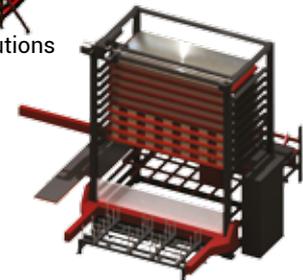
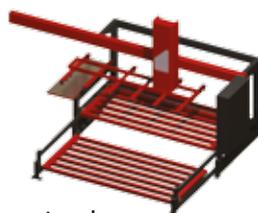
AE-2610NT



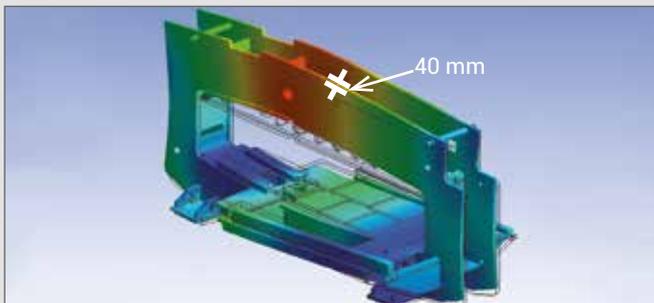
AE-255NT

AUTOMATION OPTIONS (ONLY AE-2510NT AND AE-2610NT)

Please check model availability.



Modular automation solutions for load\unload operations



High rigidity

At 40 mm thick, the bridge frame of the AE-NT series is one of the most robust available. The high rigidity provided by this allows for high speed, high accuracy, stable processing for the entire life of the machine.



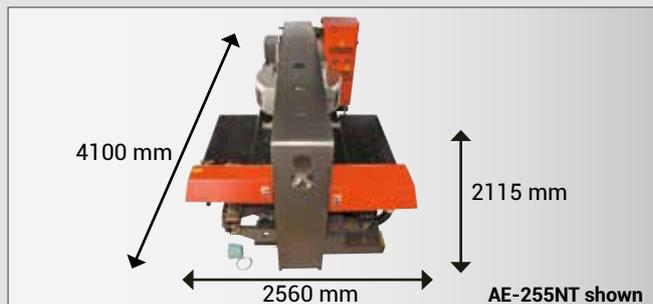
Large capacity turret

AMADA's high capacity, thick turret configuration allows 45 tools to be loaded quickly and easily. The 120 mm thick upper turret securely guides the tools during operation to provide high accuracy processing.



Tool balancer

The tool balancer is used to load/unload large size tools in the turret. It facilitates and accelerates the setup of tools, alleviates the workload of the operator, and enhances the operating rate of the AE-NT series.



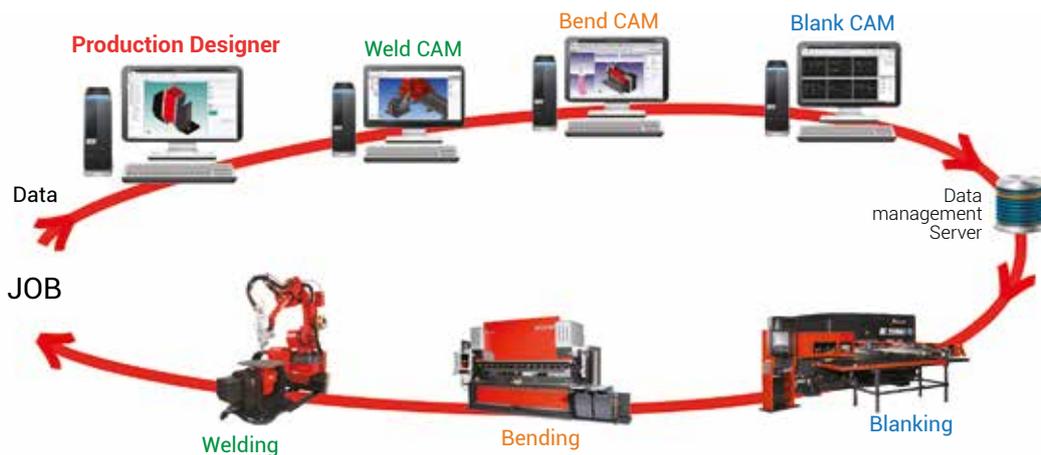
Space-saving

With no need for a chiller to cool hydraulic components, the AE-NT offers a compact layout and an efficient, productive design.

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.



DIMENSIONS

Unit : mm

AE-255NT

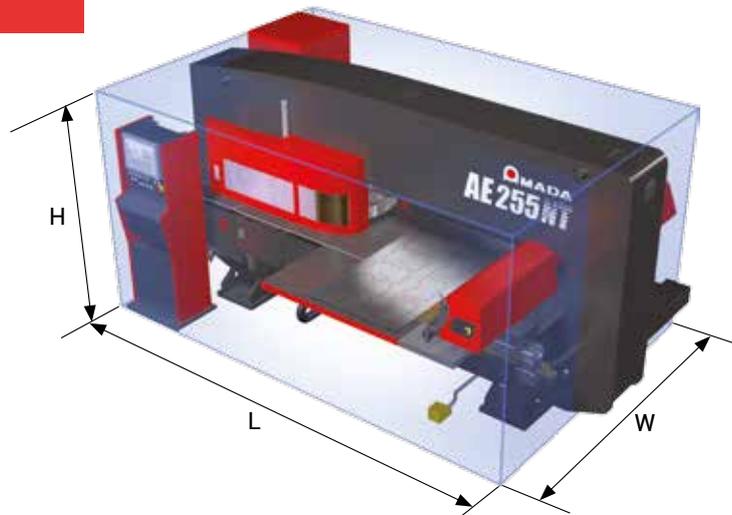
(L) 4100 x (W) 2560 x (H) 2115

AE-2510NT

(L) 4155 x (W) 5120 x (H) 2115

AE-2610NT

(L) 4998 x (W) 5120 x (H) 2265



Without safety devices

MACHINE SPECIFICATIONS

AE-NT Series			AE-255NT	AE-2510NT	AE-2610NT
Numerical control			AMNC/F (FANUC 31i-PB)		
Punching force		kN	200		
Drive system			Single AC servo drive		
Turret	Number of stations		45 (4 Auto Index stations)		
Controlled axes			X, Y, C, T + A		
Axis travel distance	X x Y	mm	1270 x 1270	2500 x 1270	2500 x 1525
Maximum simultaneous feed rate	X / Y	m/min	100		
Maximum hit rate (punching/marketing)		hpm	370* / 900 *5 mm stroke / 25.4 mm pitch	350* / 900 *5 mm stroke / 25.4 mm pitch	
Punching accuracy		mm	± 0.1		
Work range without reposition		mm	1270 x 1270	2500 x 1270	2500 x 1525
Maximum sheet thickness for:		mm	3.2		
- High speed floating brush table (option)		mm	6.4		
Maximum material mass		kg	50 (F1), 150 (F4)		
Work chute (option) size		mm	300 x 300 (for material thickness 3.2 mm)		
Machine mass		kg	12000	12500	13800

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.

The official model name of the machines and units described in this catalogue are non-hyphenated like AE2510NT. Use this registered model names when you contact the authorities for applying for installation, exporting, or financing.

The hyphenated spellings like AE-2510NT 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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