



# SOLUTION

## AE<sup>NT</sup> SERIES

COMPACT, COST-EFFECTIVE PUNCHING



**AMADA**

# AE-NT SERIES

## COMPACT, COST-EFFECTIVE PUNCHING

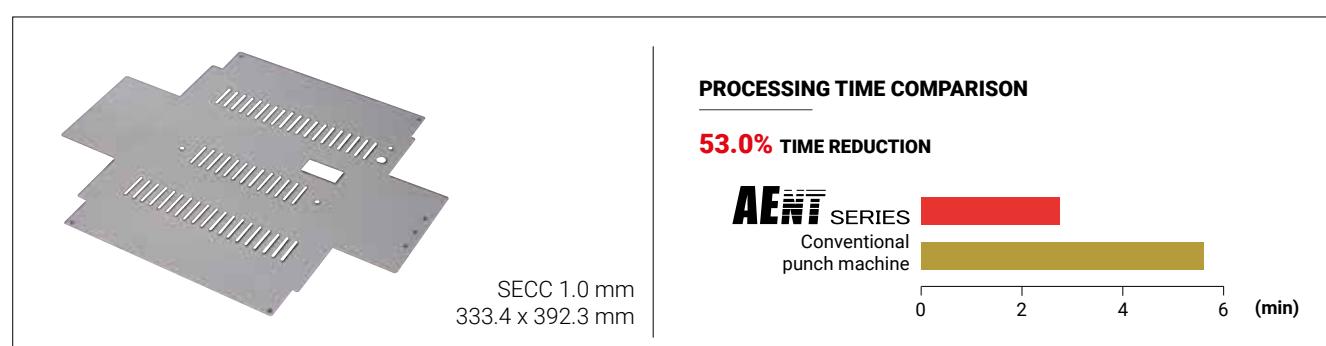
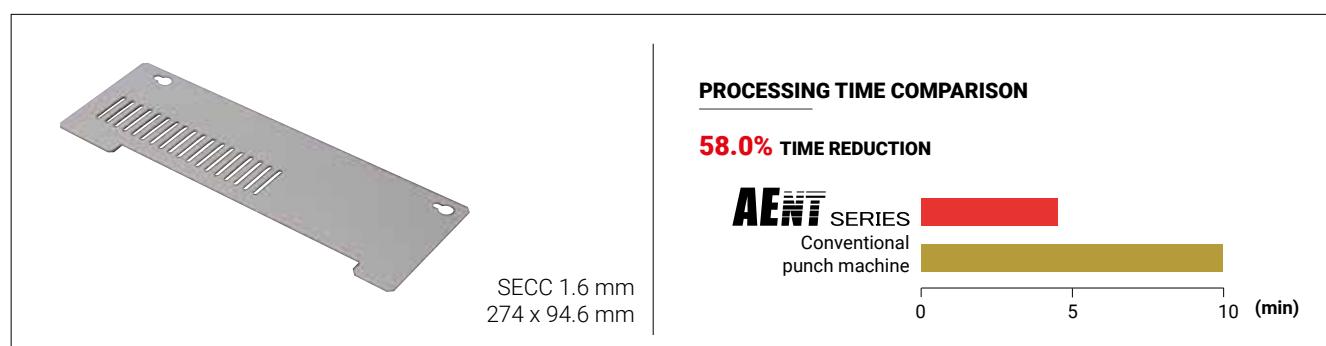
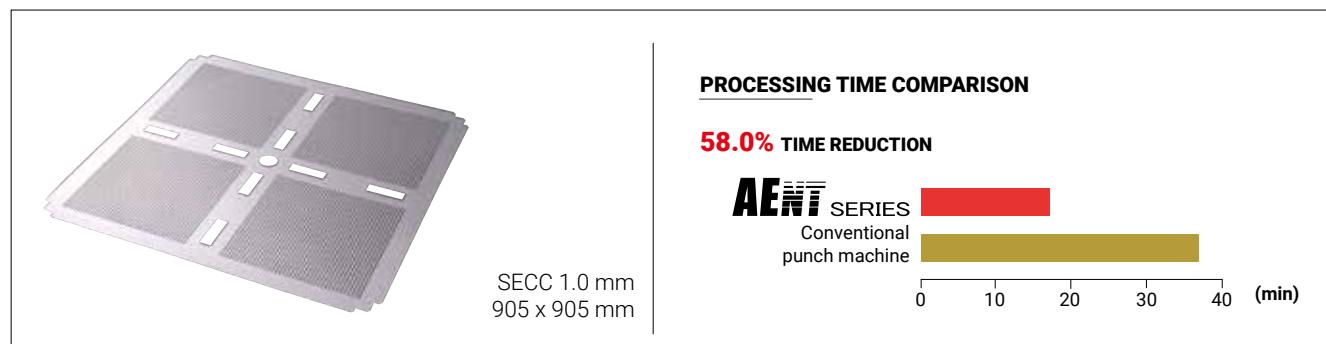
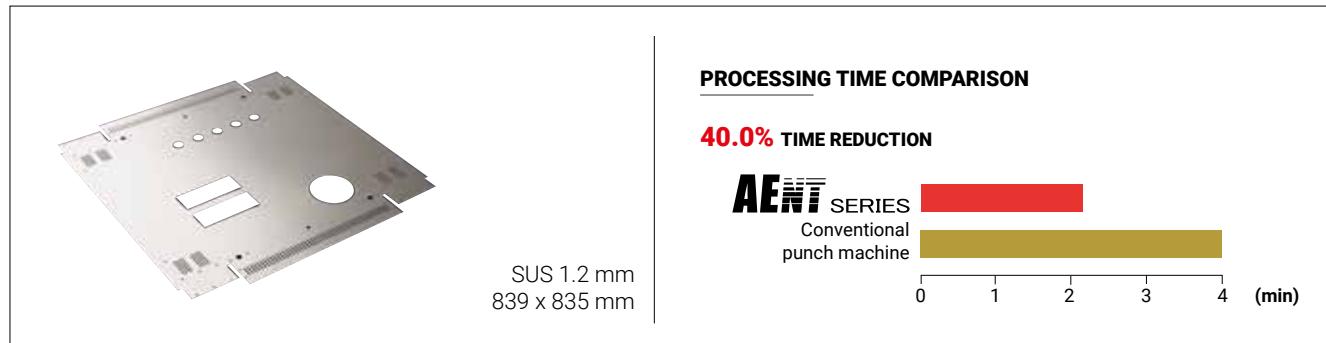
### ALL ELECTRIC 20T PUNCHING SOLUTION

AMADA has 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. With the introduction of the 3i control system, many process integration functions are included to enhance this environmentally friendly, cost efficient solution.



Photograph may include optional equipment

## TYPICAL PROCESSING SAMPLES

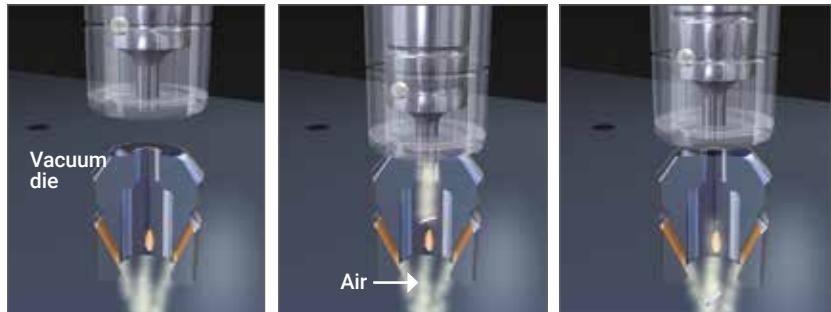


## ACHIEVEMENT OF STABLE, HIGH SPEED PROCESSING

### 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.



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.



Setup reduction

Defective part reduction

Material utilization improvement

Processing speed improvement

Customer requirements

Process integration

Energy saving

Space saving

The compact, eco-friendly, intelligent AE-NT series  
meets your requirements

1

2

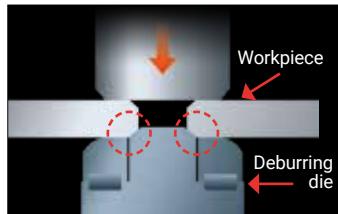
3

Achievement of stable,  
high speed processing

Achievement of  
high quality processing

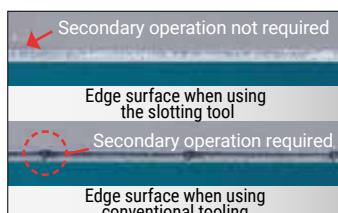
Achievement of  
process integration

## 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.



### 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.



### 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.

## ACHIEVEMENT OF PROCESS INTEGRATION



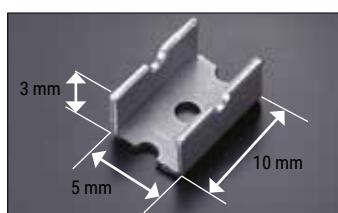
### High speed forming

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.



### Downward forming

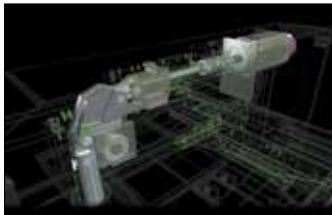
Parts can be formed at high speed without damage or scratching. To avoid damage to down forms, such as burring and tapping, the floating brush table lifts the material away from the die before it is moved to the next punching position.



### Safety inch bending

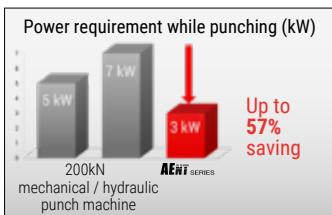
Small flanges can be processed in-cycle. Small or rounded flanges that are traditionally difficult to gauge on a press brake can be incorporated into the punching process.

## 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.



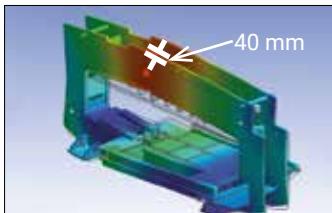
### Ecology

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 3i 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. The ability to connect to AMADA's V-factory IoT service solution can enhance machine uptime.



### 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.



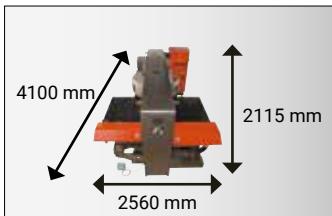
### Large capacity turret

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.

# 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.



## AUTOMATION OPTIONS

**ONLY AE-2510NT AND AE-2610NT** Please check model availability.

Modular automation solutions for load\unload operations



Loader



Sheet load\unload solutions



Part removal solutions



Auto storage

## LINE UP



AE-255NT



AE-2510NT



AE-2610NT

## 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 3i                     |   |             |
| Punching force  |                    | 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 |
| Maximum simultaneous feed rate  | X / Y              | m/min                       | 100                                       |             |
| Maximum hit rate:<br>- punching (5 mm stroke / 25.4 mm pitch)<br>- marking  |                    | hpm<br>hpm                  | 370<br>900                                | 350<br>900  |
| Punching accuracy   |                    | mm                          | ± 0.1                                     |             |
| Work range without reposition   |                    | mm                          | 1270 x 1270                               | 2500 x 1270 |
| Maximum sheet thickness for:<br>- High speed floating brush table (option)<br>- High density brush table (option) |                    | mm<br>mm                    | 3.2<br>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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