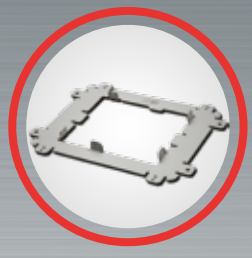
SOLUTION

PUNCHING

AE NT SERIES

SINGLE AC SERVO-DRIVE TURRET PUNCH PRESSES



AMADA

AE NT SERIES

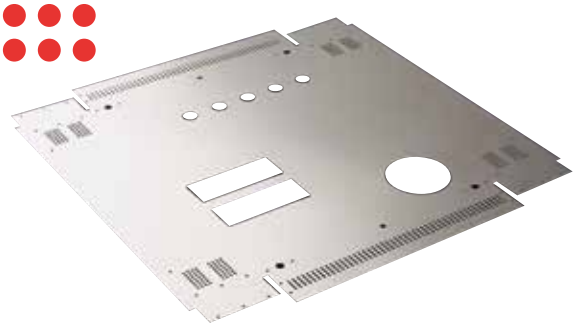
SINGLE AC SERVO-DRIVE TURRET PUNCH PRESSES

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

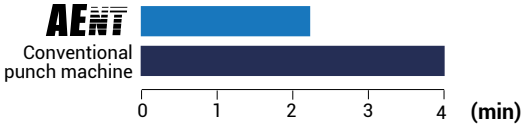
TYPICAL PROCESSING SAMPLES



Material: SUS 1.2 mm
Dimension: 839 x 835 mm

PROCESSING TIME COMPARISON

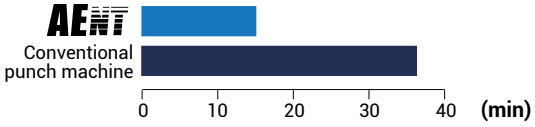
40% TIME REDUCTION

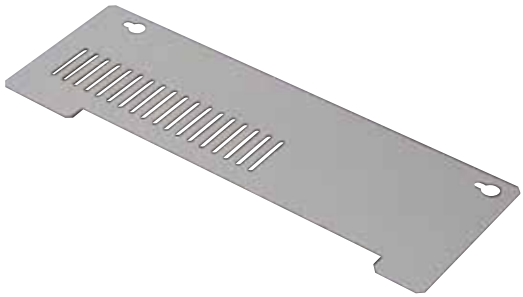


Material: SECC 1.0 mm
Dimension: 905 x 905 mm

PROCESSING TIME COMPARISON

58% TIME REDUCTION

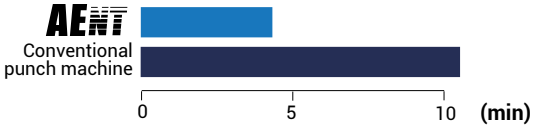


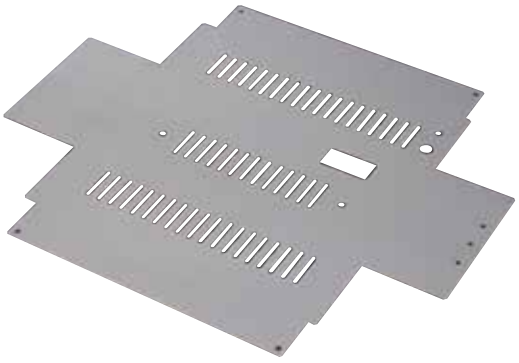


Material: SECC 1.6 mm
Dimension: 274 x 94.6 mm

PROCESSING TIME COMPARISON

58% TIME REDUCTION

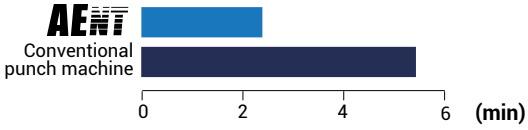




Material: SECC 1.0 mm
Dimension: 333.4 x 392.3 mm

PROCESSING TIME COMPARISON

53% TIME REDUCTION



AE NT SERIES

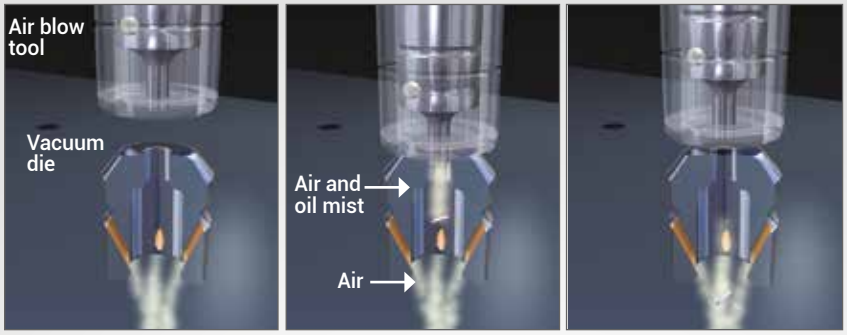
ACHIEVEMENT OF STABLE, HIGH SPEED PROCESSING

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. The optional Slug Suction Unit can be specified to produce the same effect for the larger station sizes.

Air blow tool + power vacuum system

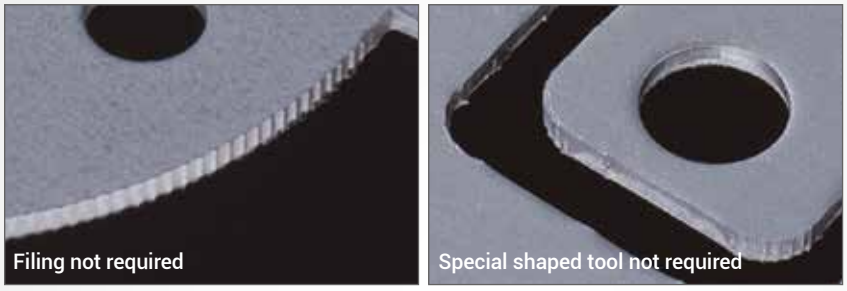


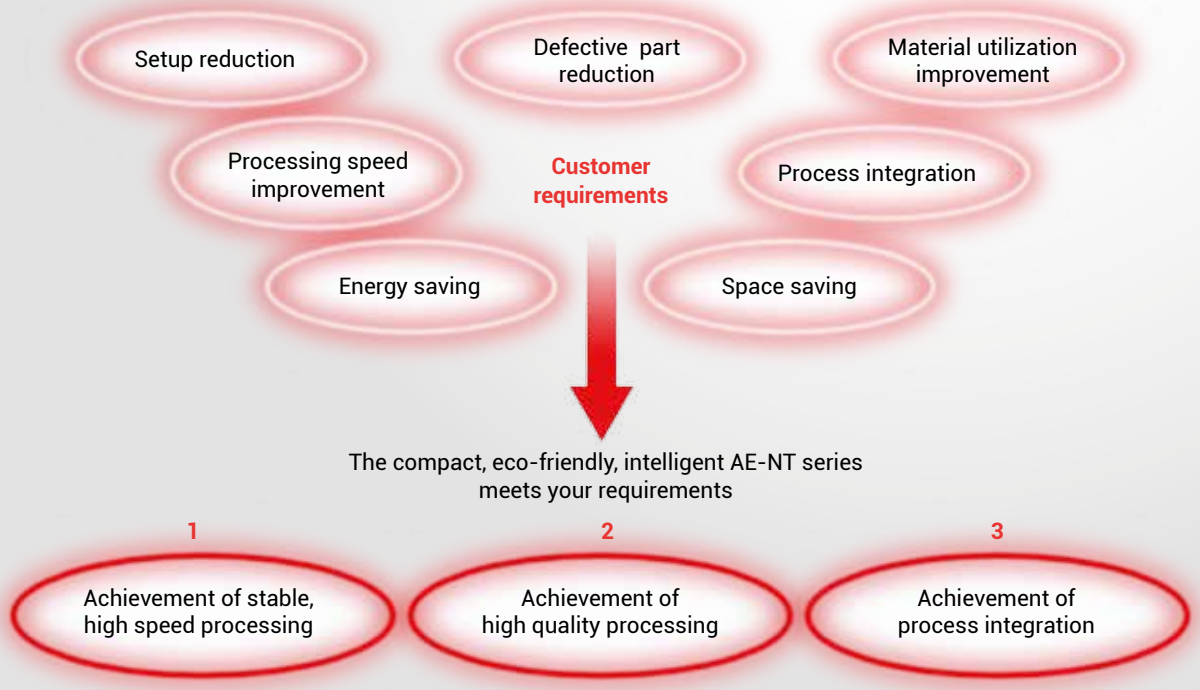
The air blow tool injects air and oil mist into the die during punching to prevent slug sticking and pulling. The power vacuum system sucks the slug down through the die.

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.



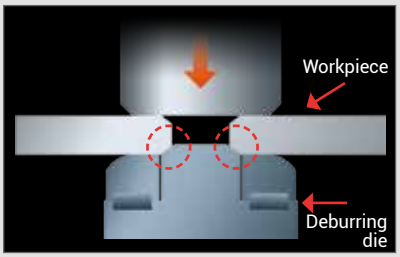


ACHIEVEMENT OF HIGH QUALITY PROCESSING

HIGH SPEED DEBURRING

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

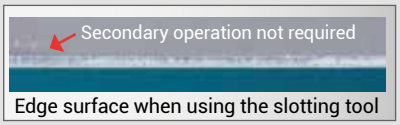

Deburring tool (10 x 10 mm SQ)



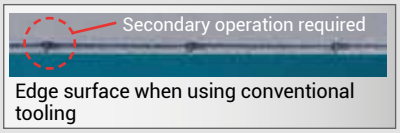
SLOTING

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



Edge surface when using the slotting tool

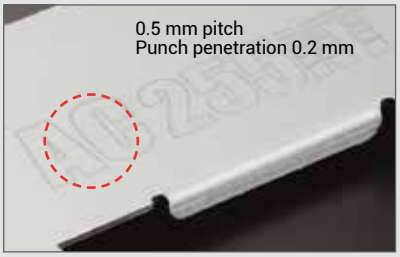


Edge surface when using conventional tooling

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.

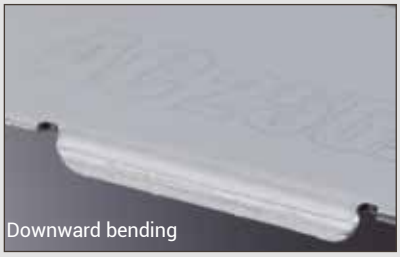

Offset bending tools


Offset bending

DOWNWARD FORMING

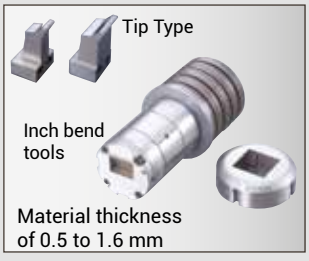
Parts can be formed at high speed without damage or scratching
To avoid damage to down forms, such as burring and tapping, the floating brush table lifts the material away from the die before it is moved to the next punching position.


Tapping tools

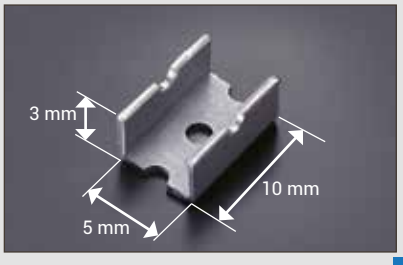

Downward bending

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.

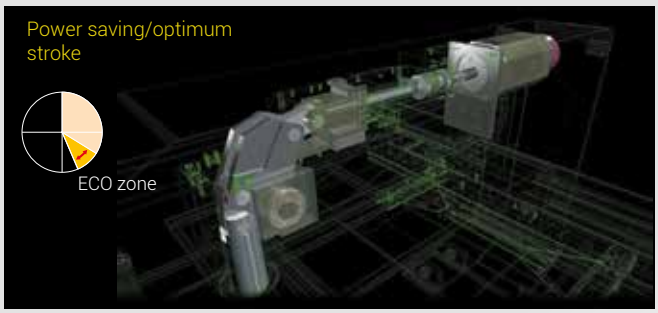


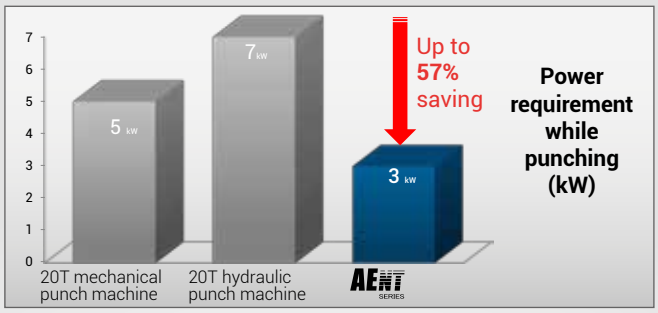
Material thickness of 0.5 to 1.6 mm



AE-NT SERIES

FUNCTIONS AND OPTIONAL EQUIPMENT



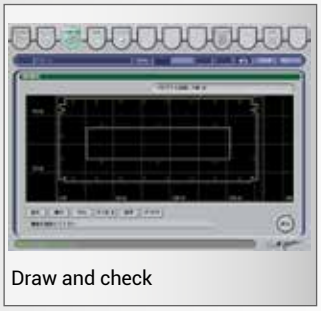


Drive mechanism

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.


Draw and check


Tool setup


Press pattern control

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.

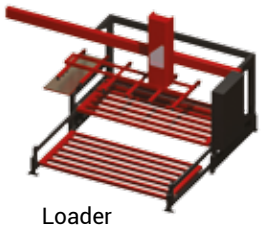
LINE UP


AE-2510 NT


AE-255 NT

AUTOMATION OPTIONS (ONLY AE-2510 NT)

Please check model availability.

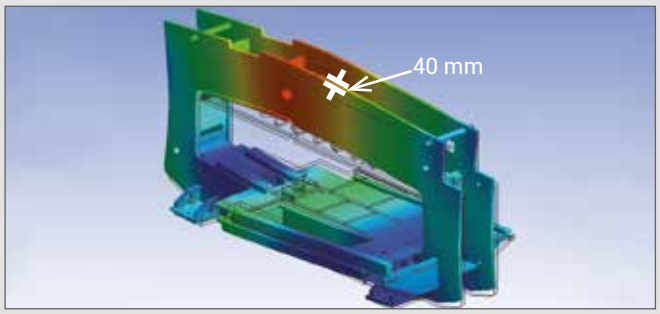

Loader


Part removal solutions


Sheet load\unload solutions


Auto storage

Modular automation solutions for load\unload operations



High rigidity

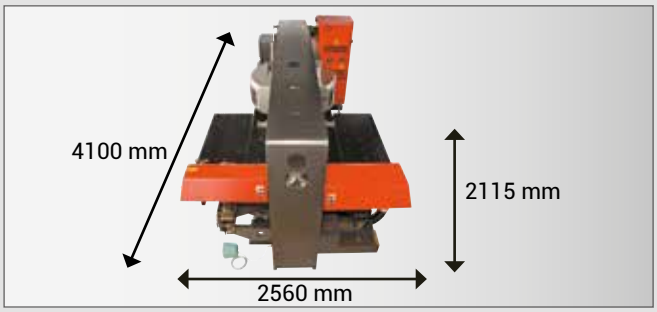
At 40mm thick, the patented bridge frame of the AE-NT series is one of the most robust available. The high rigidity provided by this allows for high speed, high accuracy, stable processing for the entire life of the machine.

Large capacity turret

Amada's high capacity, thick turret conguration allows 51 tools to be loaded quickly and easily. The 120mm 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.



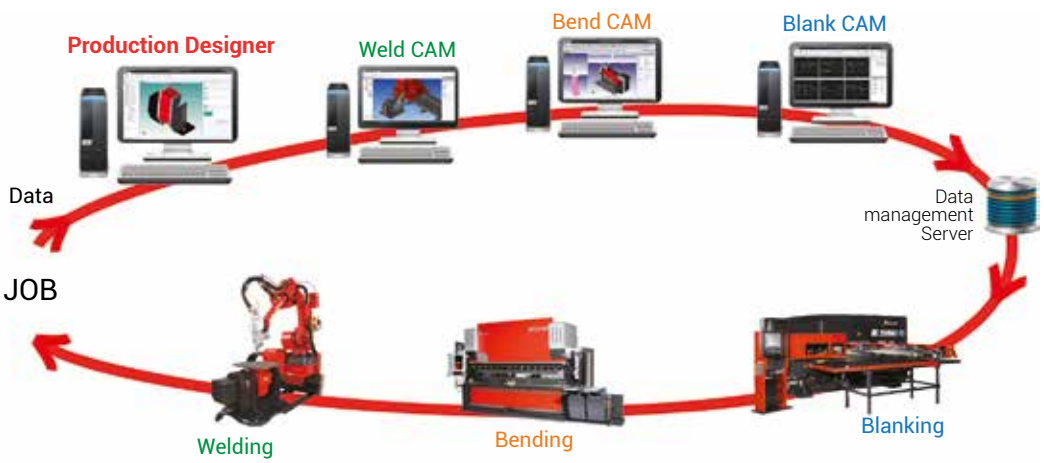
Space-saving

The AE-NT series has a throat depth of 1270 mm and a large capacity turret holding 51 tools. Combined with a very compact layout, these features provide 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.

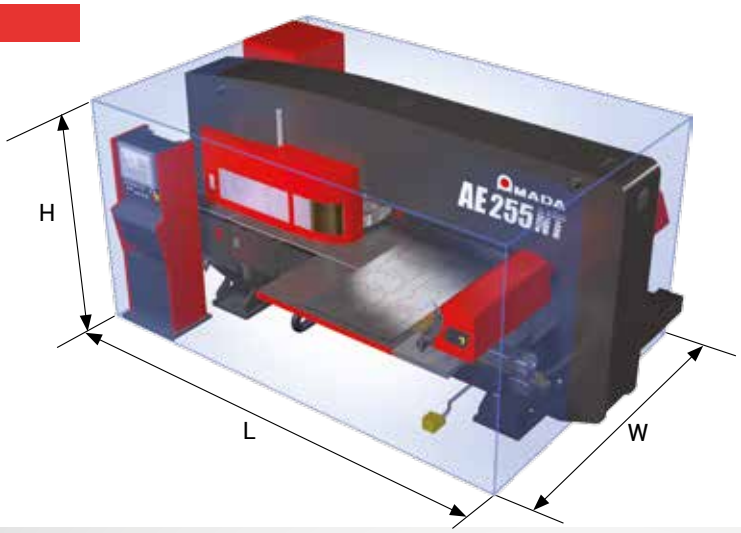


DIMENSIONS

AE-255NT
(L) 4105 x (W) 2560 x (H) 2115

AE-2510NT
(L) 4155 x (W) 5120 x (H) 2115

Unit : mm



Without safety equipments

MACHINE SPECIFICATIONS

AE NT Series			AE-255NT	AE-2510NT
Press capacity		kN	200	
Drive system			Single AC servo drive	
Stroke length		mm	42	
Maximum material thickness for: - Standard brush table - High speed floating brush table (option) - High density brush table (option)		mm mm mm	3.2 3.2 6.4	
Axis travel without repositionning		mm	1270 x 1270	1270 × 2500
Maximum axis feed speed (X x Y)		m/min	80 x 60	
Maximum worksheet weight		kg	50 (F1), 150 (F4)	
Stroke rate 5 mm stroke, 25.4 mm pitch	X axis	min	370	250
	Y axis		270	280
Punching accuracy		mm	± 0.1	
Turret rotation speed		RPM	30	
Work chute (option) size		mm	300 x 300 (for material thickness 3.2 mm)	
NC unit			AMNC/F (FANUC 31i-PB)	
Power requirements		kVA	19	
Air requirements	pressure	MPa	0.5	
	flow	Nl/mn	750	
Mass of machine		kg	12000	12500

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-2510 NT 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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