



SOLUTION

HG ATC SERIES

HYBRID BENDING MACHINE
WITH AUTOMATIC TOOL CHANGER



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VASTLY REDUCED DAILY SET-UP TIMES

RAPID TURNAROUND BETWEEN JOBS

AMADA engineered the HG-ATC as an ideal solution for variable lot sizes and complex tool layouts. The Automatic Tool Changer (ATC) can load even the most complex tool layout within three minutes and allows operators of varied experience levels to efficiently utilise this bending system.

The key benefits of the ATC are:

- Quick tool set-ups
- Four independent tool manipulators
- Automatic and safe tool locking by hydraulic clamps
- Ability to reverse punches

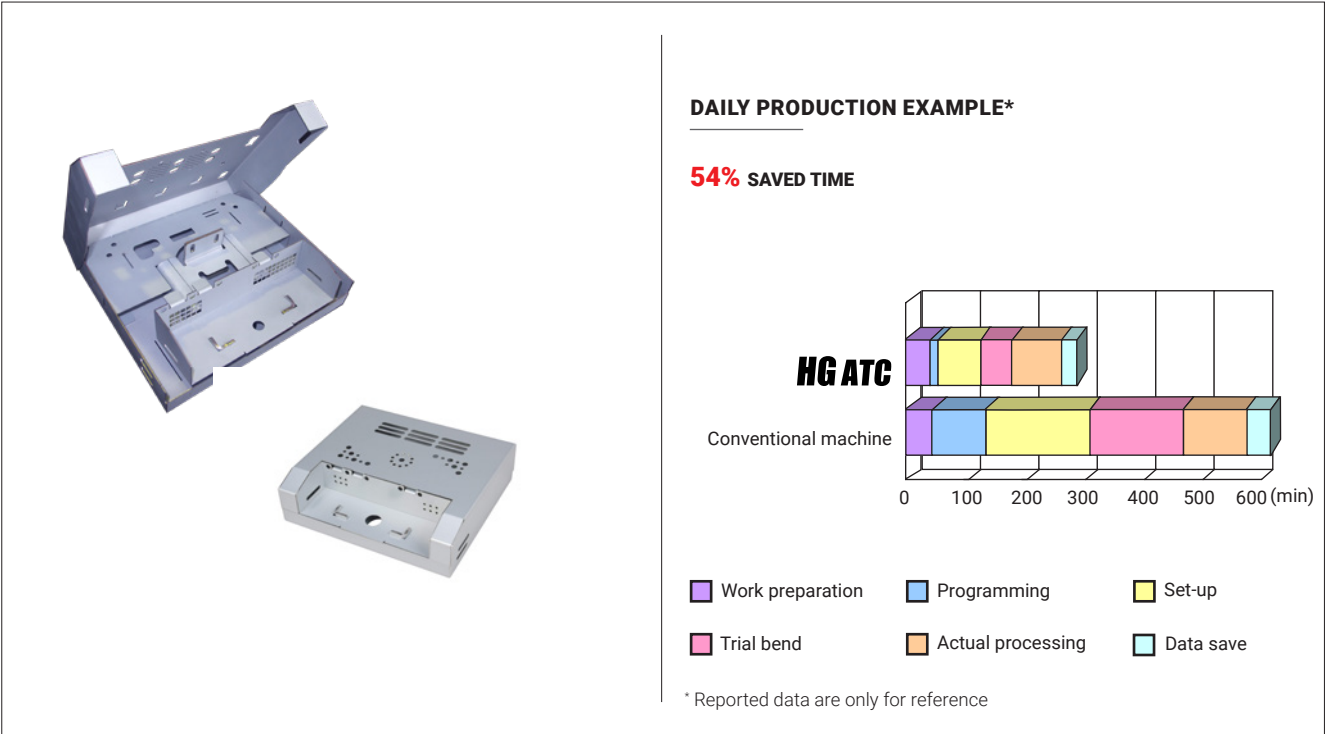
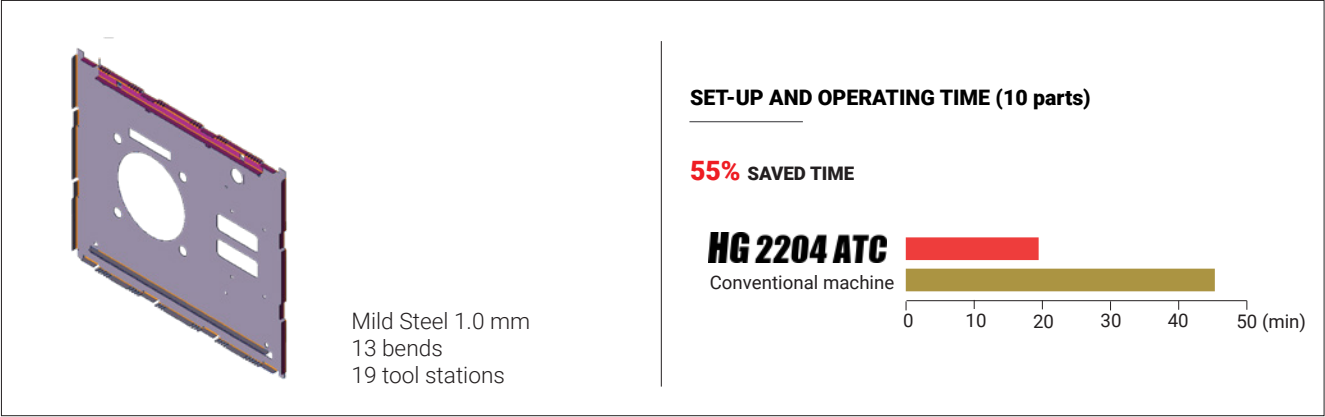
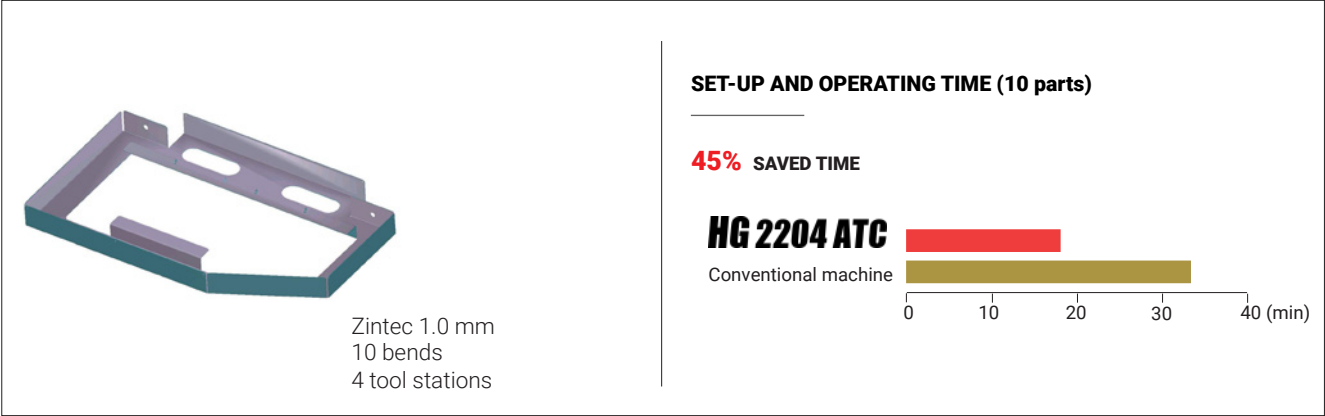
Other standard features on the HG-ATC include:

- AMNC 3i: the latest touchscreen numerical control
- An integrated bend sensor that guarantees consistent bend angle accuracy
- A servo/hydraulic drive system that consumes less energy than a conventional press brake

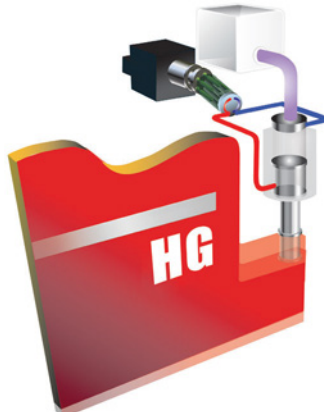


Photograph may include optional equipment

TYPICAL PROCESSING SAMPLES



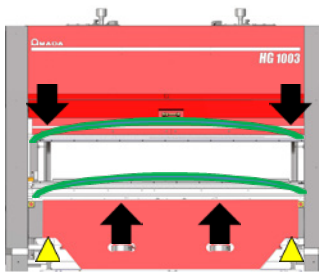
HIGHLY ACCURATE BENDING FUNCTION



UNIQUE HYBRID DRIVE SYSTEM

Thanks to its independent AC-SERVO motor drive and its highly efficient bidirectional hydraulic pumps, the bending operation offers the following key benefits:

- Extremely fast approach, bending and return speeds provide faster cycle times and produce more parts per hour
- Unrivalled ram positioning and repeatability of $\pm 0.01\text{mm}$
- Programmable ram tilting and free off-center bending capacity allows for quick set-up of multi-stage part bending
- Low power consumption: thanks to Hybrid technology, apparent power (kW) is reduced and, as the pump is activated on demand, it is more energy-efficient.
- Stable hydraulic oil temperature ensures consistent angular accuracy
- Less hydraulic oil and fewer oil changes are required
- Very low noise level



DYNAMIC HYDRAULIC CROWN BENDING

The hydraulic cylinders located in the lower beam of the machine automatically compensate for any upper beam deflection:

- Achieves consistent bend angles throughout the entire length of the machine
- Operators can program a complete workflow by staging multiple tool set-ups along the bed
- The crowning system is able to detect real force and can actively compensate for upper beam deflection

AUTOMATIC INTELLIGENT TOOLING SET-UP



AUTOMATIC TOOL CHANGER

Equipped with an ATC (Automatic Tool Changer) the HG-ATC provides unmatched flexibility and productivity. The ATC is capable of storing 18 punches and 25 dies. Locating and loading the appropriate tooling is quick and efficient. The system's four-axis manipulator precisely selects and positions punches and dies from the tool magazine - avoiding costly delays typically associated with conventional tool changes. The manipulators can move independently and a clever algorithm guarantees the best set-up time.

HG-ATC features and benefits include:

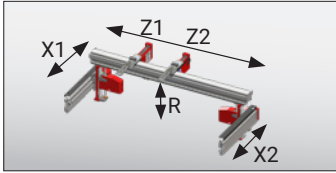
- Much quicker and more precise tool set-up compared to manual operation
- Possibility to introduce rush jobs seamlessly
- Perfect for small batch sizes and complex tool layouts
- Huge ergonomic advantage for the operator



AITS - ID TOOLING, A STEP TOWARD IOT WORLD

- By a simple click, reading Data Matrix code, all tool information can be registered into AMADA ID Tooling System server.
- This function allow a smart management of tool information for a stable bending and secure set-up.

STANDARD EQUIPMENT AND FUNCTIONS



Back Gauge System

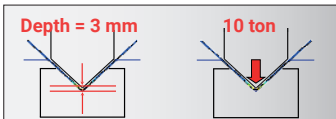
Flexible, accurate and high performance back gauge, made of an extruded aluminium alloy and exclusively made for AMADA. The use of this technology allows a very light but strong and rigid moving element, giving maximum speed and maintaining long term accuracy.



Thickness check Constant result

Thickness Detection System (TDS)

TDS detects variations in material thickness and automatically adjusts the bend position to provide accurate and stable bending results.



Position Control Force Control

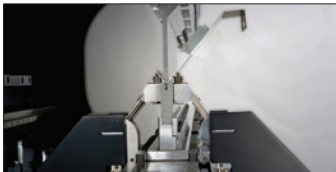
Force Control System

Accurate bending is achieved by perfect force calculation and control. This function for angle control is possible with the correct tools and angle combination.



Digipro

The AMADA Digipro is a highly-accurate, electronic angle measuring device that transmits the measured angle wirelessly to the press brake's NC. The program is then automatically corrected as required, providing a precise bend angle.



Bi-S System

This automatic angle-adjustment device ensures highly accurate bending even when material thickness and properties vary from part to part. This removes the need for test bending and adjustment of the initial bend angle, which eliminates scrap and reduces set-up time.



The Delta X finger

- A useful feature when bending asymmetrical work pieces.
- A flexible position with pin exchange is possible.



Hand wheel

- Easy adjustment of all axes.
- Simple and flexible manual adjustments.



Bar code reader

- Built-in bar code reader.
- Eliminates program search time and errors.



Hydraulic tool holder

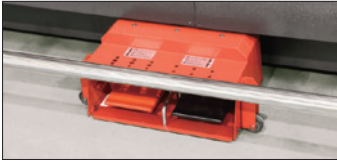
- In case of manual set-up:
- Front installation/front removal.
- No pipes on rear side.



Die holder cleaning

Integrated and automatic die holder cleaning guarantees a totally automatic tool changing solution.

STANDARD EQUIPMENT AND FUNCTIONS



Automatic slide foot pedal

The bending control pedal moves according to the operators position to avoid manual repositioning; improving ergonomics and saving time.



Safety device

The machine is equipped with a laser security system (AKAS V) that is positioned automatically.)



Safety door

During the automatic tool change, a vertical sliding door protects the operators. It is manually closed and opens automatically at the end of the tool loading cycle.



LED light (rear and front)

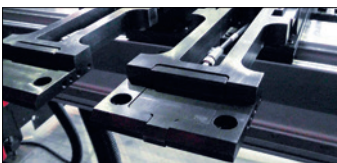
LED lights are installed on each side of the upper beam to increase visibility of the work area.

OPTIONAL EQUIPMENT AND FUNCTIONS



U-Shape finger

- Special finger shape for smart gauging of complex part shape.
- Finger position is properly calculated by AMNC 3i or VPSS 3i.



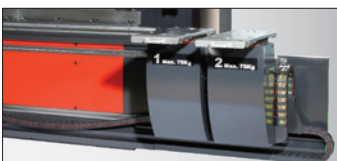
Sensor fingers

- Eliminates gauging errors.
- Sensor pauses the bend process when the part is separated from the gauge.



Front support

Front workpiece support.



Sheet follower

- Improves accuracy and safety.
- Assists operator.
- Eliminates the need for a second operator.



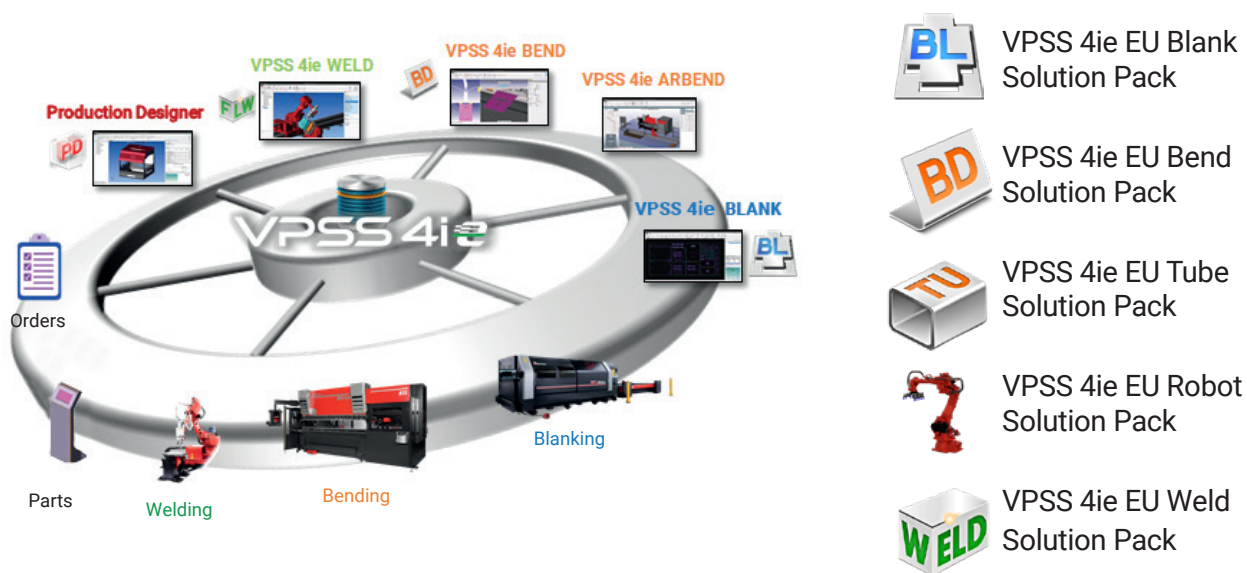
3rd Foot pedal

- Improves ergonomics of operator.
- Easier bending process by multi station set-up.

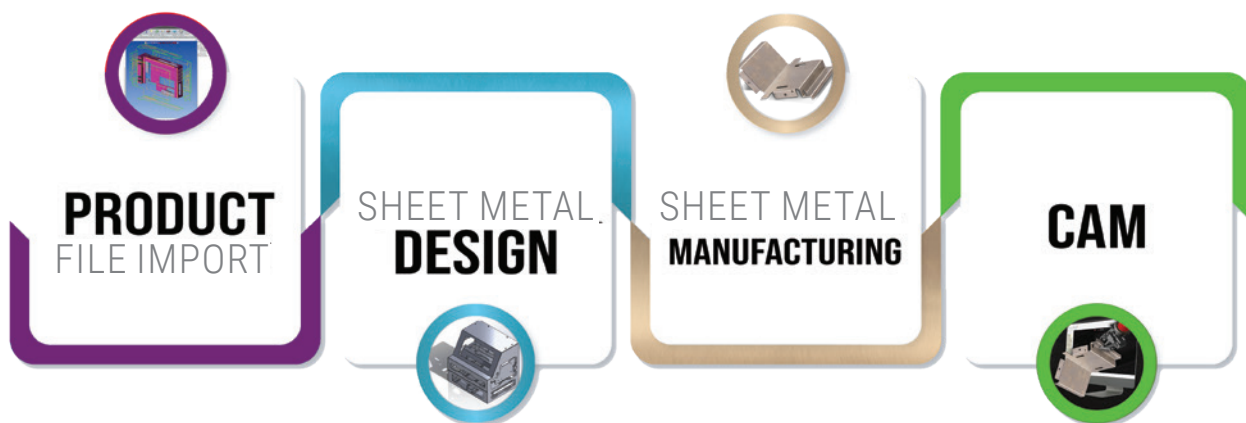
ADVANCED SHEET METAL ENGINEERING SYSTEM

AMADA strongly believes that innovative software is the core of productive sheet metal processing. With decades of experience in the sheet metal industry and by working together with our customers, we have developed easy to use software solutions designed to meet the industry requirements. AMADA software solutions increase customer productivity through integrated development with AMADA machines and an emphasis on virtual prototyping and simulation systems.

Our VPSS 4ie CAD/CAM software helps you virtually simulate the production process, identify potential issues and make adjustments before manufacturing. With our solutions, you can maximise quality and increase efficiency whilst minimising waste. The fully automated and optimised software can also be used by less experienced operators.

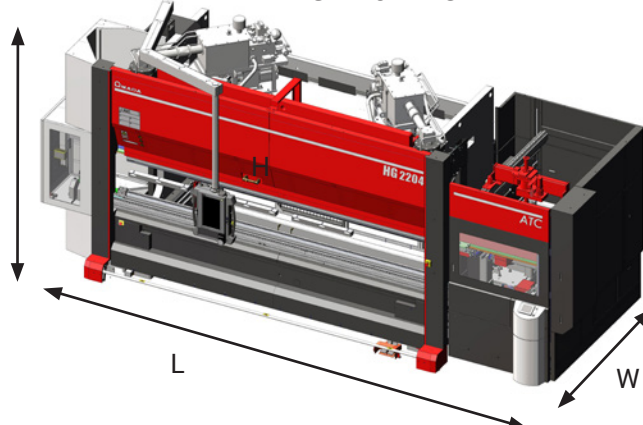


VPSS 4ie Suite, from design to production-ready in four simple steps



DIMENSIONS

HG-2204ATC



HG-ATC		2204
Total length (L)*	mm	8230
Total width (W)**	mm	3287
Total height (H)	mm	3325
Machine mass	kg	22400

*Total length is intended with the arm and the NC maximum extended on the exterior, and all doors closed.

**Total width is intended with the arm and the NC maximum extended in front, and all doors closed.

MACHINE SPECIFICATIONS

HG-ATC		2204
Capacity	kN	2200
Beam length	mm	4300
Table width	mm	76
Distance between frames	mm	3760
Throat depth	mm	455
Open height (with punch holders)	mm	596 (436)
Stroke	mm	250
Working height (without tool)	mm	989
Number of crowning cylinders		3
Maximum approach speed	mm/s	220
Maximum bending speed	mm/s	20*
Maximum return speed	mm/s	250

*depending on V-size

ATC SPECIFICATIONS

HG-ATC		2204
Tool clamp		AMTS III
Tool holder length	mm	4250
Number of tool stockers (dies)		25
Number of tool stockers (punch)		18
Tool layout length	mm	15~4000
Tool length increments	mm	5

Specifications, appearance and equipment are subject to vary without notice by reason of improvement or regional requirement.



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 machine described in this catalogue is HG ATC. Use the registered model name when you contact the authorities for applying for installation, exporting, or financing. The hyphenated spelling HG-ATC is used in some portions of this catalogue for ease of readability. Hazard prevention measures are removed in the photos used in this catalogue.

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