SOLUTION

HG 1003 ARs

MEDIUM-PART AUTOMATED BENDING SYSTEM

AMADA

HG 1003 ARs

MEDIUM-PART AUTOMATED BENDING SYSTEM

TOTAL FLEXIBILITY AND BENDING EFFICIENCY

VARIABLE VOLUME PRODUCTION OF DIFFERENT SHAPED PARTS

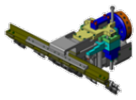
The HG-1003ARs is based on the proven technology of AMADA 's cutting edge HG-ATC press brake, utilizing an ECO hybrid drive system and an automatic tool changer for fast and accurate tool set-ups. Material load/unload and bending are all performed by a single 6 axis and 1 travel axis articulated robot which is capable of a complete range of motions.

The HG-1003ARs system can bend complex shaped parts without multiple set-ups and run continuous production for extended periods of time.

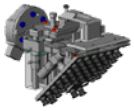
Photograph includes optional equipment

TYPICAL PROCESSING SAMPLES

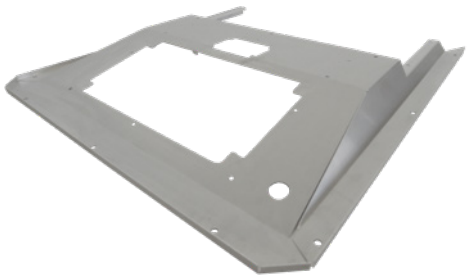
Stainless steel 0.8 mm
860.0 x 550.0 mm
12 bends

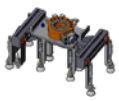


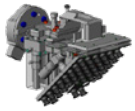
Stainless steel 0.8 mm
950.0 x 130.0 mm
9 bends



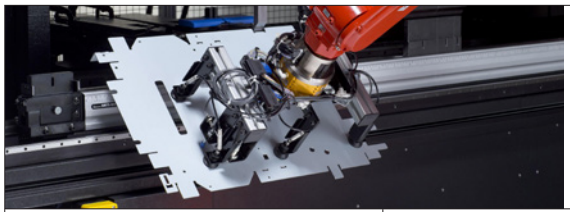
Stainless steel 1 mm
400.0 x 250.0 mm
8 bends







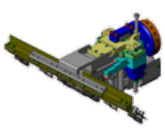
Aluminium 0.8 mm
600.0 x 550.0 mm
16 bends



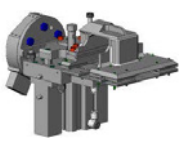
Grippers

Three types of grippers are available: combination, vacuum and mechanical for the optimum handling of any specific parts.

Vacuum type



Combination type



Mechanical type

HG 1003 ARs

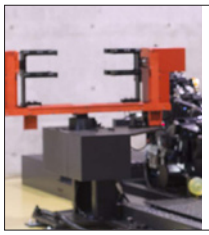
FULLY AUTOMATIC, FLEXIBLE AND RELIABLE PRODUCTION OF MEDIUM

THE WINNING SOLUTION FOR NEW BUSINESS CHALLENGES

REDUCTION OF SET-UP, RELIABLE AND ACCURATE PRODUCTION OF MEDIUM PARTS AND VARIABLE SHA

HG-1003ATC

- High speed bending utilising the new hybrid drive system.
- Automatic angle correction at any chosen part position (Bi-S sensors).
- Automatic set-up of multi-station bending layouts thanks to the automatic tool changer (ATC).
- ATC tool storage is composed by 18 racks for dies and 15 racks for punches.
- Dynamic crowning by hydraulic system achieves consistent bend angles throughout the entire length of the machine.



Rotating regripping device

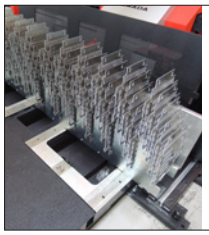
Increase of productivity by utilising a rotating device which reduces robot movement for regripping operations, easy regripping of parts with complex shapes.

Automatic gripper change

The AGC allows the robot to change the gripper auto-matically which is needed for the production; gripper can be changed even during production of the part when necessary for correct handling.
AGC can be fitted with 9 grippers.

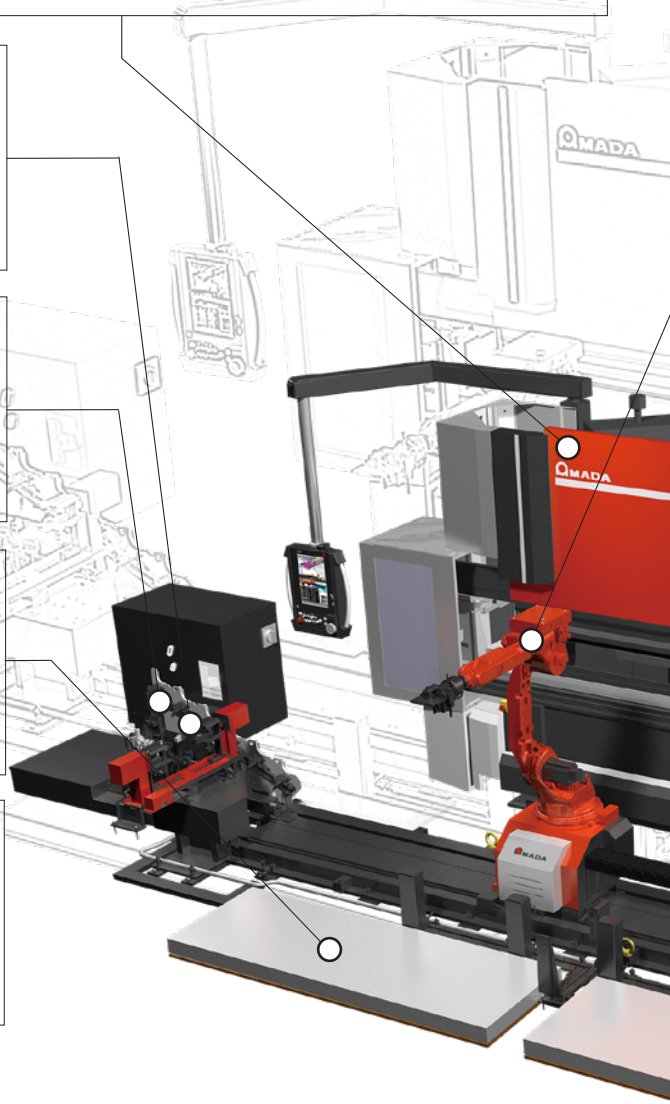
Loading area with Thickness Detector

Parts can be accurately picked up by robot; double thickness detector ensures only single parts are loaded. Two loading areas are standard, third one can be set as an option.



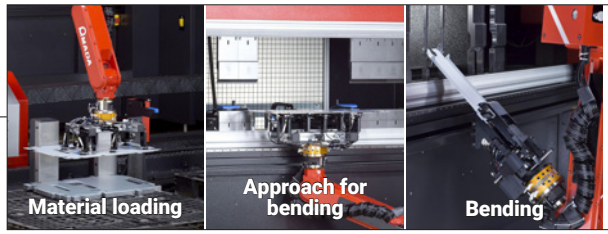
Vertical Loading

For loading of special or formed parts which can't be stacked flat.



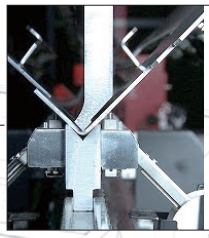
PARTS, VARIABLE VOLUME ...

APES, LONG UNMANNED PRODUCTION FOR OPTIMUM PRODUCTIVITY



6 Axes + travel axis articulated Robot

The 6 axis + travel axis articulated robot performs all material loading, material handling during bending and unloading of formed parts.



Reliable production and Reduction of trial bend

Bi-S 1 axis (2 axis option) guarantees high accuracy, reliable production and elimination of trial bend.

Unloading - Pallet

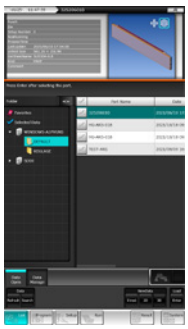
Unloading for conventionel pallets on the floor (max 3 pallets).

Conveyor

Single piece unloading on to a belt conveyor; parts can be picked up by operator outside thesafety fence without stopping production.

HG 1003 ARs

EASY OPERATION


Program load

Tool layout

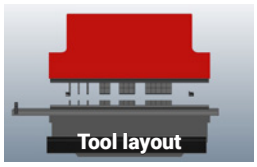

Condition check

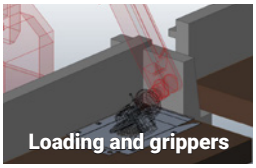
Start

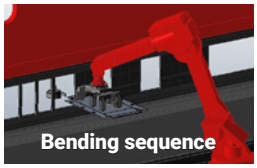
AMNC 3i

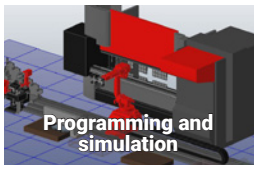
The AMNC 3i control is optimised for ease of use.

- The multi-touch LCD panel, with its user-friendly design, provides intuitive and smart operation.
- The 18.5 inch vertical display is the unique control panel where operator can manage the entire process.







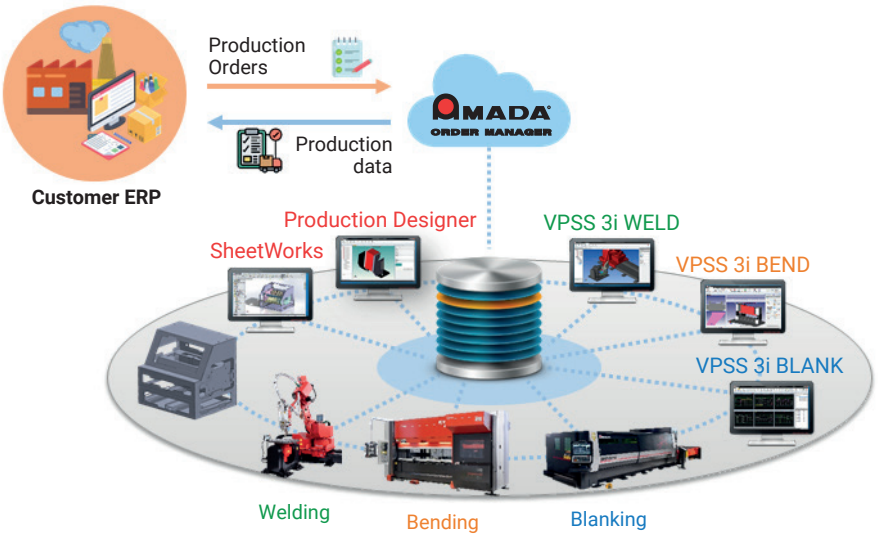


DEDICATED CAM

A 3D part is selected from the database then all the process steps (tool set-up and bending sequence, robot grip position, UL strategy) are defined; all robot movements are automatically generated avoiding manual teaching operations. VPSS 3i ARBEND generates the press brake and robot programs offline. The programmer can check the complete simulation of the bending cycle.

A BRIDGE BETWEEN ERP AND AMADA ECO-SYSTEM

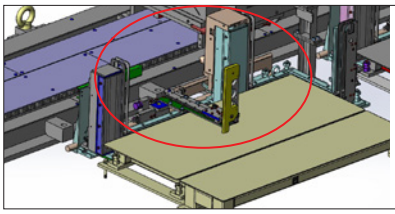
AMADA Order Manager (AOM) is the new Cloud-based platform created by AMADA.
Thanks to the AMADA standard data exchange interface, the customer's existing ERP system can be easily connected to AOM to allow the production data to be sent to the AMADA machines and for collecting the machine production data.
AMADA provides a suite of perfectly integrated software products. Each software technology can take advantage of the VPSS concept (Virtual Prototype Simulation System) to lead to a total, enhanced and error-free production with AMADA machines.



OTHER FUNCTIONS AND OPTIONAL EQUIPMENT

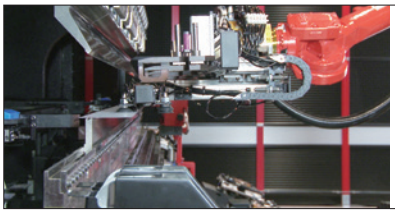
Automatic Pallet Changer

AC300 automatically changes the full pallet for an empty one; pallet can be removed by the operator outside the fence without stopping production; it ensures high unloading capacity.



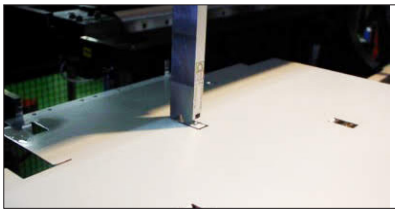
Loading area Separator

Loading area can be divided in two by an easy setup device; it allows double the loading area capacity.



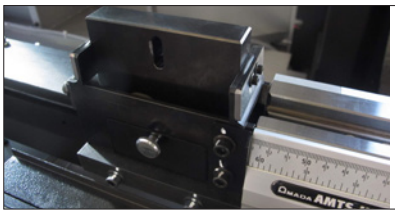
L-axis shift (Delta X)

- Independent X-axis system allows effective gauging even for variable part shapes.
- Maximum L-axis shift stroke: ±150 mm.



X-gauging device (option)

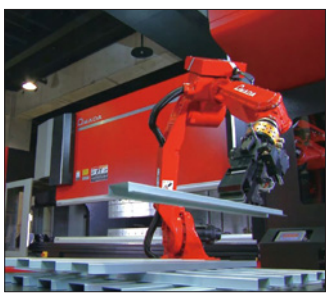
Accurate part positioning is set by X gauging device; this funtion is particularly important for reliable production of parts where horizontal positioning has to be very accurate.



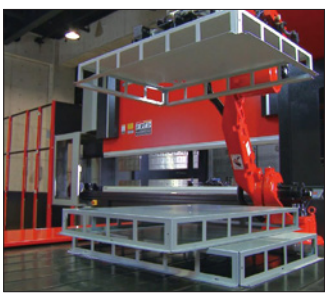
Die & Die holder cleaning

Integrated and automatic devices for die and die holder cleaning guarantees a reliable performance of tool changing solution.

Various unloading patterns



Parallel cross stacking



90° twist stacking*

Vertical stacking*

Single piece flow*

*Pictures for illustration only

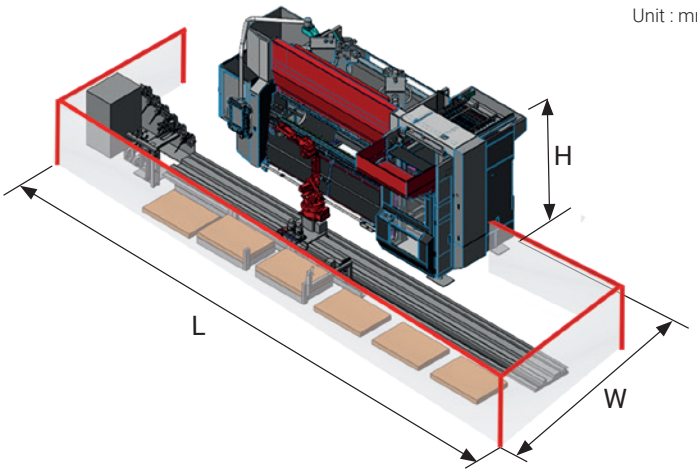
DIMENSIONS

HG-1003 ARs
Dimension for standard configuration 8.8 m track stroke
(L) 13700 x (W) 6500 x (H) 3002

Maximum height reachable by robot:
3860 (including part)

Dimensions for all other configurations are different.
Please contact us for detailed specification.

Unit : mm



MACHINE SPECIFICATIONS

PRESS BRAKE			HG-1003 ARs
Capacity		kN	1000
Open height		mm	596
Stroke length		mm	250
Approach speed		mm/s	220
Bending speed		mm/s	20 (without robot following)
Angle sensor			Bi-S (1 axis: standard, 2 axes: option)
ATC	Number of punch stockers		15
	Number of die stockers		18
ROBOT			
Axis composition			Robot: 6 axes, Travel axis: 1
Payload		kg	20 (including gripper)
Workpiece size	Max.	mm	1000 x 800 or 1200 x 500
	Min.	mm	150 x 90
Workpiece thickness		mm	0.5 ~ 6.0
Travel axis	Stroke length	m	5 / 6.4 / 8.8
Grippers types			Combination types
			Vacuum types
			Mechanical type
Loading	Number of positions		From 2 up to 4, depending on layout configuration vertical loading is available
	Stacking height	mm	300
Unloading	Number of positions		1, 2 or 3 depending on track lenght and layout configuration
	Unloading method		Flat or vertical Conveyor and pallet changer AC 300 also available

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 machine described in this catalogue is HG-1003 ARs. Use the registered model name when you contact the authorities for applying for installation, exporting, or financing.
Hazard prevention measures are removed in the photos used in this catalogue.

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