

SOLUTION

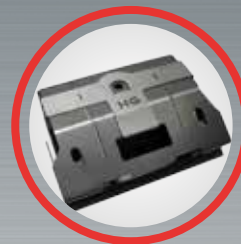
BENDING



HG SERIES



RAPID, PRECISE HYBRID PRESS BRAKE



AMADA

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RAPID, PRECISE HYBRID PRESS BRAKE

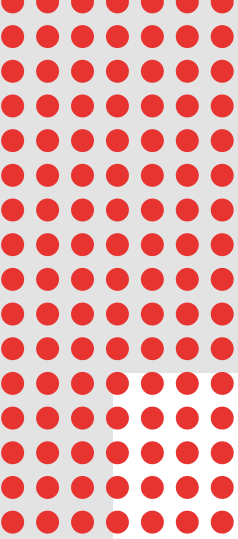
A COMPLETE SOLUTION FOR HIGH SPEED, HIGH PRECISION BENDING REQUIREMENTS

The HG series is a high end bending solution, designed to be versatile and fulfil the requirements of an ever changing production environment. A hybrid drive and rigid frame provide a solid foundation to expand the processing range of your business and cope with future bending applications.

In addition to high speed and high precision bending, the HG series provides significant energy savings and an improved user interface. Utilising an 18.5 inch AMNC 3i touch screen interface, even unskilled operators can achieve a target bend angle at the first attempt. This ease of use, combined with additional production enhancing features, all contribute to shorten lead times and deliver high quality bending results.



Photograph may include optional equipment



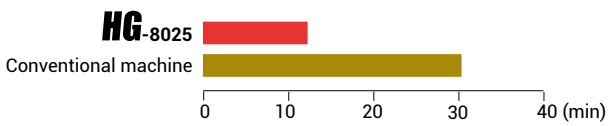
TYPICAL PROCESSING SAMPLES



Material: galvanised steel 1.6 mm
Dimension: 414.2 x 194.6 mm

PRODUCTIVITY COMPARISON

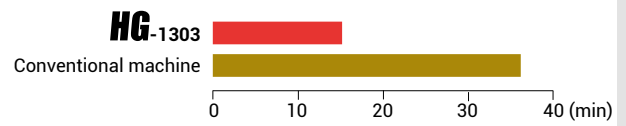
60% TIME REDUCTION



Material: galvanised steel 1.6 mm
Dimension: 531.9 x 180.8 mm

PRODUCTIVITY COMPARISON

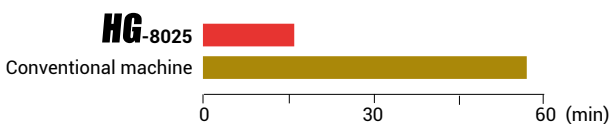
58% TIME REDUCTION



Material: stainless steel 1.2 mm
Dimension: 334.4 x 288.8 mm

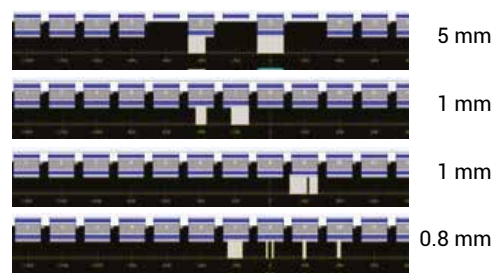
PRODUCTIVITY COMPARISON

71% TIME REDUCTION

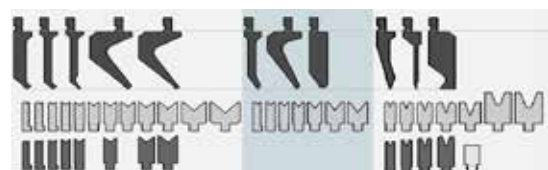


"COMMON TOOL LAYOUT" by automatic software

Example: One layout for 4 workpieces



PREVIOUS
NOW



AFH & Staged Bend Tool

AMADA Fixed Height and Staged Bending tools are the best solution to minimise set-up operations.

EASY OPERATION



AMNC 3i

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

- Multi-touch LCD panel with a user-friendly design provides intuitive smartphone like operation.
- The 18.5 inch vertical display means you can view all the necessary program and bend information on one screen.



1

Program call



2

Bend sequence



3

Set-up



4

Processing

BENDING CAM SOFTWARE

VPSS 3i BEND automatically selects tools, creates tool layouts and bend sequences.



Auto Batch Mode

CAM software makes programs without operator intervention.

Common Tool layout

CAM software proposes a common tool layout for a maximum of 99 parts



The AMNC 3i control uses offline programs to reduce set-up time and increase machine efficiency.

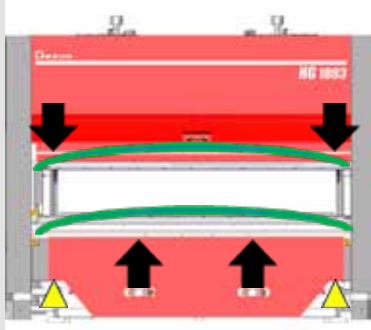


VIRTUAL PROTOTYPE SIMULATION SYSTEM

VPSS 3i suite is the Intelligent, Interactive and Integrated software environment that surrounds the new AMADA solutions. This system considers the complete assembly and manufacturing process from the very beginning.



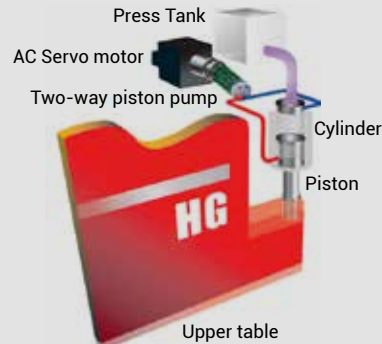
DYNAMIC HYDRAULIC CROWNING AND HYBRID DRIVE SYSTEMS



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



HYBRID DRIVE SYSTEM

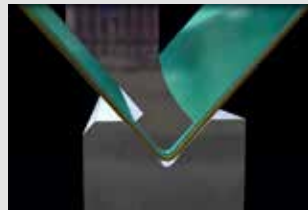
The **hybrid drive system** ensures highly accurate bending regardless of the bend length or position on the beam. An electric servo motor controls a variable hydraulic piston pump to provide improved productivity and significant energy savings.

This system allows energy savings. The consumption is reduced by 30% in average versus Inverter technology.

ANGLE CONTROL AND ANGLE MEASURING SYSTEMS



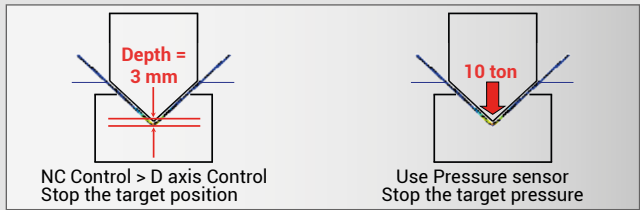
Thickness check



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.



NC Control > D axis Control
Stop the target position

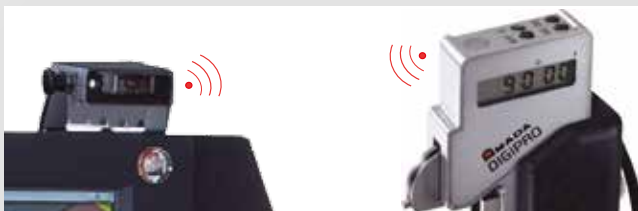
Position Control

Use Pressure sensor
Stop the target pressure

Force Control

FORCE CONTROL SYSTEM

Accuracy of the bend is achieved by perfect force calculation and control. The 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

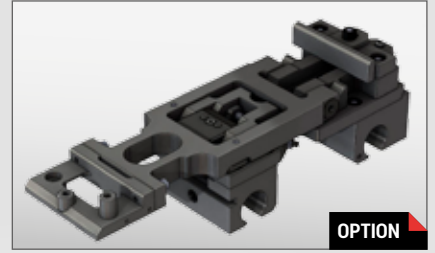


Bi-L

Bi-S & Bi-L

These automatic angle adjustment devices ensure 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, eliminating scrap and reducing set-up time.

BACK GAUGE AND FINGER



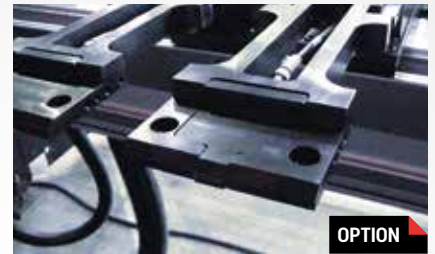
New back gauge system

The 5 axis back gauge has a tool navigation system whereby the finger indicates the precise position to place the tools.

The Delta X finger is a useful feature when bending asymmetrical workpieces.

Fast Finger

The back gauge with active security allows to increase the productivity and safety with low impact force and maximum speed. (Only available on low tonnage machines)



Finger pin

- Stable gauging by flexible PIN position

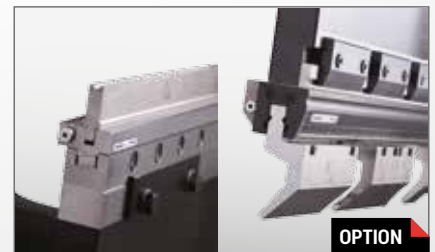
U-Shape finger

- 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 : bending process is allowed only when gauging is correctly made.
- Sensor pauses the bend process when the part is separated from the gauge.

TOOL CLAMPING SOLUTION



Manual grip SGRIP AGRIP M (option)

- Front installation/front removal
- Space between grips can be eliminated
- Manual rear plate (option)
- Automatic pull up of punches (A-GRIP M)

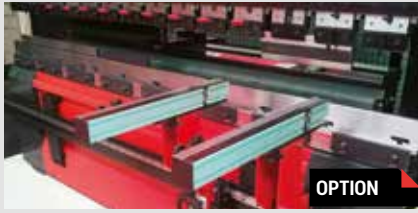
Automatic grip for AMADA tool AGRIP A (hydraulic) R-GRIP (pneumatic)

- Front installation/front removal
- Automatic pull up function
- Easy to reposition and remove grips
- Space between grips can be eliminated

Automatic hydraulic grip

- Front installation/front removal
- Easy setting of complicated tool layouts
- No external pipes on rear side

ERGONOMIC & MATERIAL HANDLING FUNCTIONS



Front support

- Front workpiece support



Sheet follower

- Improves accuracy and safety
- Assists operator for handling large and heavy parts
- Eliminates the need for a second operator



LED light (rear and front)

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



Hand wheel

- Adjust all axis
- Easy and flexible manual adjustments



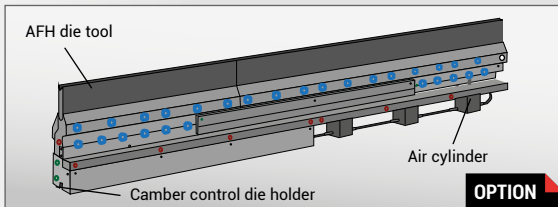
Bar code reader

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



Safety device

- Laser beam type (AKAS 5)
- Light curtain type (SICK)



Anti camber system

- Reduces camber due to laser cutting.
- Software calculates pressure based on mechanical properties.
- This system can also be used for hemming bends.



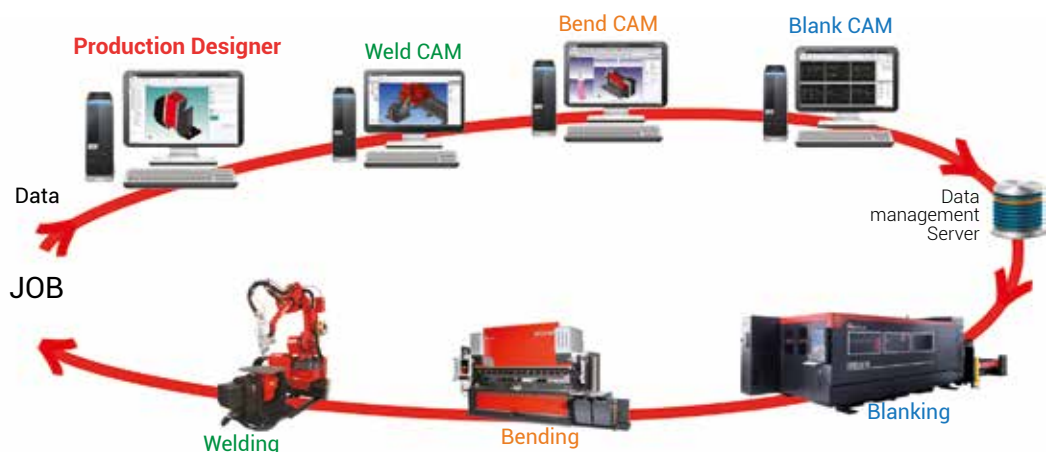
Automatic slide foot pedal

- The pedal moves according to the operators position to avoid manual repositioning, improve ergonomics and saves time.

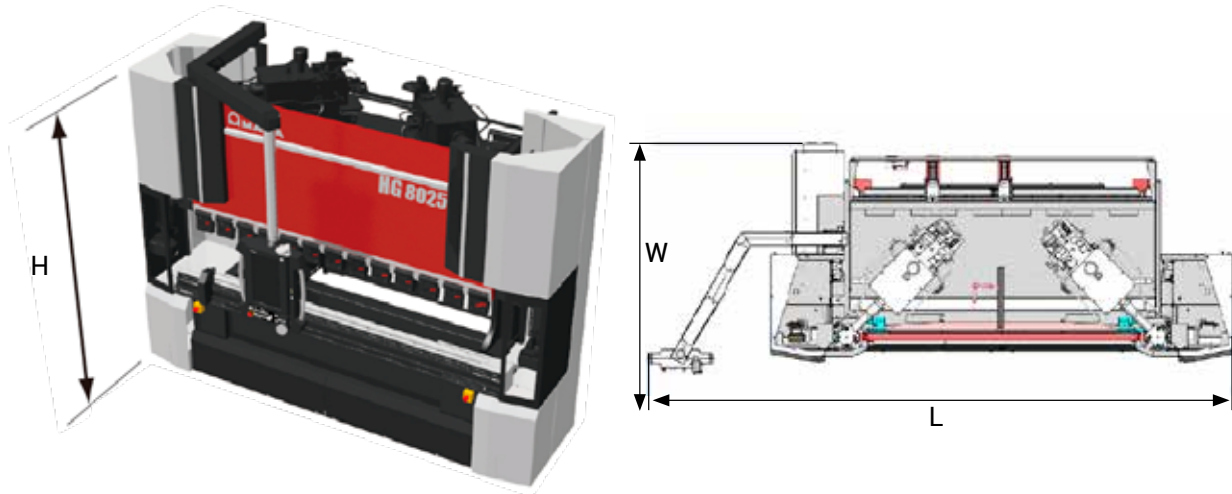
THE SHEET METAL DIGITAL FACTORY

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



HG		5020	8025	1003	1303	1703	2203	2204
Total length (L)	mm	4490	5000	5490	5510	5560	5589	6650
Total width (W)	mm	2923	2923	2813	2820	2880	2922	2922
Total height (H)	mm	2846	2862	2892	3125	3189	3215	3215
Machine mass	kg	5630	6700	7650	9750	13800	15650	18500

MACHINE SPECIFICATIONS

HG		5020	8025	1003	1303	1703	2203	2204
Capacity	kN	500	800	1000	1300	1700	2200	
Beam length	mm	2150	2600	3110			4300	
Table width	mm	60			90			
Distance between frames	mm	1700	2210	2700			3760	
Throat depth	mm	455						
Open height (with punch holders)	mm	520 (400)						
Stroke	mm	250						
Working height (without tool)	mm	953			960			
Number of crowning cylinders		2			3			
Maximum approach speed	mm/s	220						
Maximum bending speed	mm/s	20°						
Maximum return speed	mm/s	250						
Axes number controlled (Included XΔX)		9 (11)						

*depending on V-size

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

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