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.
**TYPICAL PROCESSING SAMPLES**

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

**PRODUCTIVITY COMPARISON**

**60% TIME REDUCTION**

**HG-8025**  
Conventional machine  

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

**PRODUCTIVITY COMPARISON**

**58% TIME REDUCTION**

**HG-1303**  
Conventional machine  

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

**PRODUCTIVITY COMPARISON**

**71% TIME REDUCTION**

**HG-8025**  
Conventional machine  

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**"COMMON TOOL LAYOUT" by automatic software**

Example: One layout for 4 workpieces

- 5 mm
- 1 mm
- 1 mm
- 0.8 mm

**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

**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 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 DETECTION SYSTEM (TDS)

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

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

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.
**HG SERIES**

**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

**The 5 axis back gauge**

**The Delta X finger**
Automatic slide foot pedal
- The pedal moves according to the operator’s position to avoid manual repositioning, improve ergonomics and save time.

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

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.

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)

Front support
- Front workpiece support

LED light (rear and front)
- LED lights are installed on each side of the upper beam to increase visibility of the work area

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.

Production Designer
Weld CAM
Bend CAM
Blank CAM
Data management Server

Data
JOB
Welding
Bending
Blanking
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.

Specifications, appearance and equipment are subject to change without notice by reason of improvement.

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