

SOLUTION

BENDING



HFE *M2* SERIES



THE PRESS BRAKE REFERENCE



AMADA

HFE M2 SERIES

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PRECISION, AN AMADA PRINCIPLE

With more than 125,000 press brakes and 1,500 bending cells installed, Amada has a long history and extensive knowledge of the sheet metal folding market.

The reasons for this are simple: excellent technical knowhow, being responsive to customer needs and producing reliable and accurate machines. We meet our customer's expectations by listening carefully to their needs and responding accordingly.

In addition, we have equipped the HFE M2 with the latest technological developments, useful to both the operator and the investor. A new digital touch screen control, energy and oil saving, and a new range of labour and time saving accessories are standard features.

The goal is to make the HFE M2 more efficient and easier to operate but also environmentally friendly.



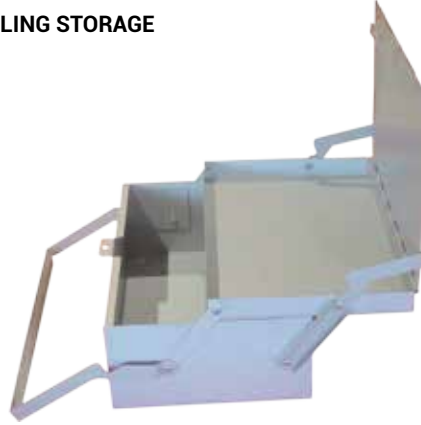
TYPICAL PROCESSING SAMPLES

POINT OF SALE EQUIPMENT



Material: mild steel 0.8 mm
Length: 1,500mm
Total number of parts: 12 - Total number of bends: 64
Processing time: 7min 28s

TOOLING STORAGE



Material: zinc coated 1mm
Total number of parts: 5 - Total number of bends: 32
Processing time: 4min 16s

RAILWAY INDUSTRY



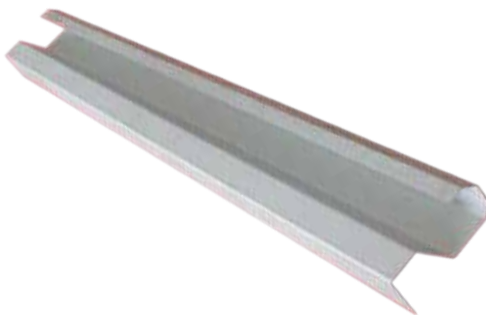
Material: mild steel 3mm
Total number of bends: 12
Processing time: 1min 36s

AGRICULTURAL INDUSTRY



Material: mild steel 4mm
Total number of bends: 6
Processing time: 42s

BUILDING EQUIPMENT



Material: zinc coated 1.2mm
Length: 2,500mm
Total number of bend: 7
Processing time: 49s

ELECTRICAL INDUSTRY



Material: mild steel 1.2mm
Length: 3,000mm
Total number of parts :2 - Total number of bends: 16
Processing time: 1min 52s

EASY OPERATION



AB Pad

The new Amada Bending Pad NC introduces a new, intuitive man/machine interface based on a touch-screen.

The care taken in developing the ergonomics and our technical know-how have combined to produce a simple, friendly and efficient interface.

It is possible to remotely monitor the operation of the machine, transfer programs and perform diagnostics.



1

Drawings can be made directly on the NC by using the new touch-screen technology



2

The operator enters the dimensions into a pop-up window. It is also possible to indicate bending priority



3

The NC control is capable of generating programs automatically. It takes into account bending constraints and ergonomics, including gauging position, component handling, bend order and required tolerance



4

For special applications, manual mode programming allows the operator to create personalised programs.



ANGLE CONTROL AND ANGLE MEASURING SYSTEMS



OPTION

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.



OPTION

Bi-J



OPTION

Bi-M

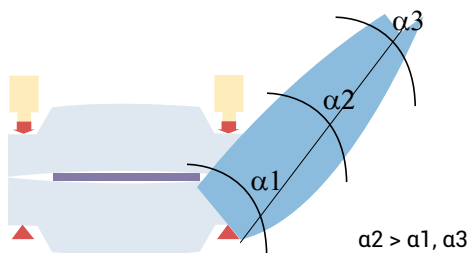
Bi-J / Bi-M

Automatic angle adjustment ensures highly accurate bending even when material thickness and properties vary from part to part.

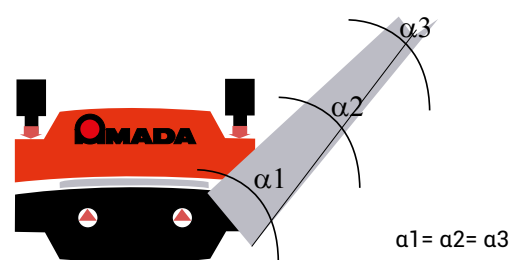
This removes the need for test bending and adjustment of the initial bend angle, eliminating scrap and reducing setup time.

BENDING PRECISION

CONSTANT ANGLE WITH PARALLEL BEAM DEFLECTION



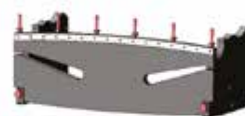
The bend accuracy of a press brake is affected by, amongst other factors, the deflection of the upper and lower beams. Conventional press brakes deflect in opposite directions. In fact, the penetration of the punch into the dies is not constant and the angle is not uniform along the length of the machine.



Amada's solution: using the principle of parallel deformation. The HFE M2 press brakes are equipped with AMADA's patented lower beam as standard, giving "Parallel Deflection" under all bending loads. This concept ensures consistent punch penetration into the vee die, over the full bending length under all loads and conditions.



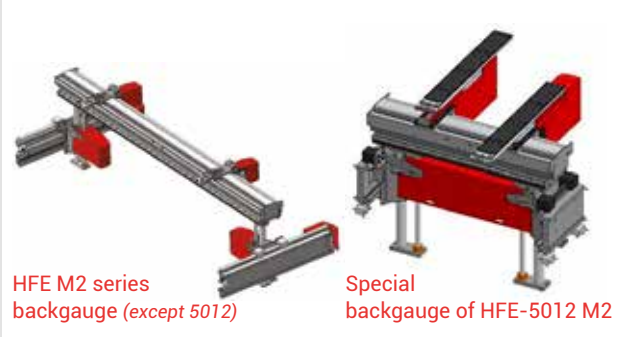
For higher tonnage versions the lower pins in the centre. This lower beam is secured to the machine frame by means of two pins in the centre of the lower beam, this allows for a certain degree of movement. Thus, when the cylinders exert the bending force at the extremities of the machine, the beam deflections are parallel.



For the machines below 130 tonnes the same result is obtained using a specially designed lower beam.

ADAPTABLE PRODUCTIVITY

BACK GAUGE SYSTEM



The back gauge of HFE M2 is available in two forms : 2 axes X, R and 5 axes X1 X2, R, Z1, Z2.

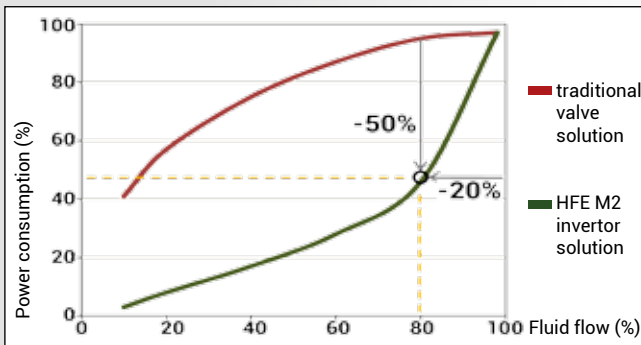
A special back gauge equips HFE-5012 M2: 2 independent X, 2 independent Z and one R axis.



The Delta X finger is a useful feature when bending asymmetrical work pieces. This option complements both 2 and 5 axes versions. It allows the creation of an offset between the two X-axis fingers, even when they are close together.

ENVIRONMENTAL CONSIDERATIONS

THE ECO DRIVE SYSTEM



The Eco drive system continually monitors and self-adjusts the bending requirements – providing benefits such as 20% less energy usage, reduced maintenance, less oil consumption, lower noise levels and increased reliability.

Optional on 4 Axis Models
(not available on HFE-5012 M2)



LINE UP



HFE-5012 M2



HFE-1703 M2*



HFE-2204L M2*

* Machine shown with optional extra features

FUNCTIONS AND OPTIONAL EQUIPMENT



Manual clamps

- Front installation/front removal
- Close the space between clamps
- Manual rear plate (option)



Manual clamps (S-grip)

- Front installation/front removal
- Prevent falling tools by mechanical groove
- Can be installed side by side
- Clamping achieved by lever operation
- Wedge adjustment by dial mechanism



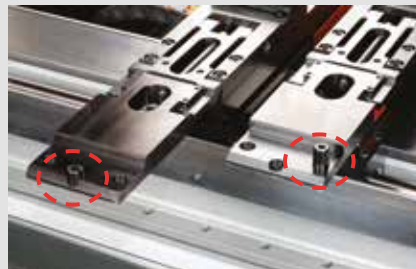
Automatic clamps (A-grip)

- Front installation / front removal
- Automatic pull up function
- Easy to reposition and remove clamps
- Manual rear plate (option)
- Can be installed side by side
- No tubes on rear side



Hand wheel

- Adjust all axis
- Easy and flexible manual adjustments



Finger pin

- Flexible position with pin exchange



Safety device

- Laser beam type (AKAS III P)
- Light curtain type (SICK)



LED light (rear)

- An LED light is installed to the rear side of the upper beam to increase operator visibility



Front support

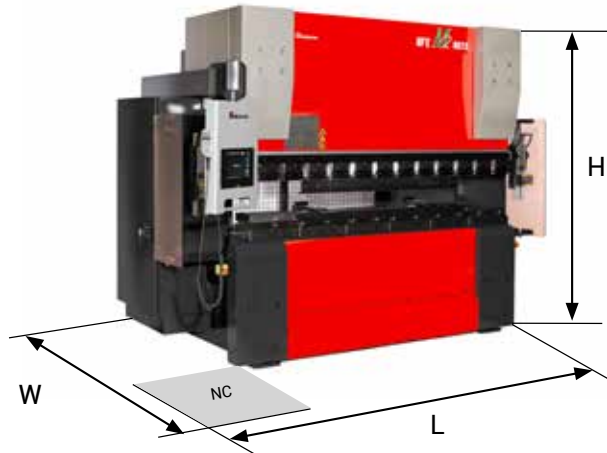
- Front workpiece support



Sheet follower

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

DIMENSIONS



HFE M2		5012	5020	8025	1003	1303	1703	1704	2204
Total length (L)	mm	2710	3340	3800	4385	4440	4470	5530	5560
Total width (W)	mm	2320	2450	2445	2430	2625	2625	2625	2625
Total height (H)	mm	2300	2450	2540	2680	2815	2900	2890	3085
Total weight	Kg	2550	4600	5600	6600	8150	11600	13900	17100

MACHINE SPECIFICATIONS

HFE M2		5012	5020	8025	1003	1303	1703	1704	2204
Capacity	kN	500	500	800	1000	1300	1700	1700	2200
Beam length	mm	1270	2090	2570	3110	3140	3170	4230	4280
Beam width	mm	60				90	180		
Distance between frames	mm	1035	1665	2125	2705	2700	2700	3760	3760
Throat depth	mm	100	420						
Open height	mm	370	470 (620)*						
Stroke	mm	150	200 (350)*						
Working height	mm	960							
Oil capacity	litre	55	90	110	150	235	235	295	
Power consumption	kW	6	9		12.5	16.5		20	
Approach speed	mm/s	100	100 (200)**			100			
Maximum bending speed	mm/s	10	10 (15)***			10			
Return speed	mm/s	100	100 (150)***			100			

*(Long Stroke) ** HI-SPEED model *** HI-SPEED model,75% tonnage limitation

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 HFE M2. 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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