

SOLUTION

BENDING



HFE *M2* SERIES



THE PRESS BRAKE REFERENCE



AMADA

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.



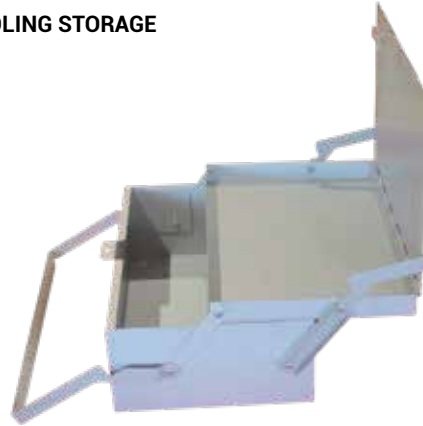
TYPICAL PROCESSING SAMPLES

POINT OF SALE EQUIPMENT



Material: mild steel 0.8mm
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



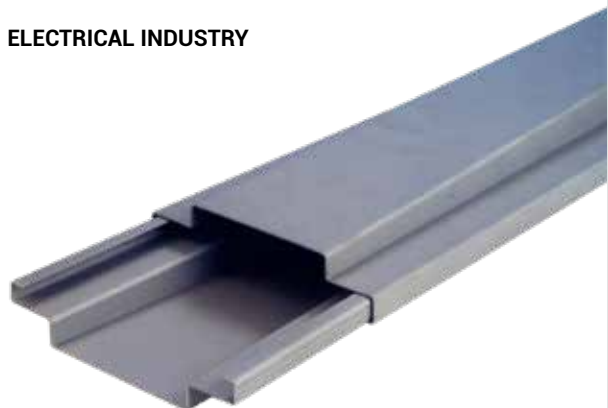
Material: mild steel 4mm
Total number of bends: 6
Processing time: 42s

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 Evolution

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.



AB PAD SIMULATOR

OPTION



The AB Pad simulator runs on a windows based PC or tablet and allows offline programming of the press brake.

ANGLE CONTROL AND ANGLE MEASURING SYSTEMS



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-J



Bi-M

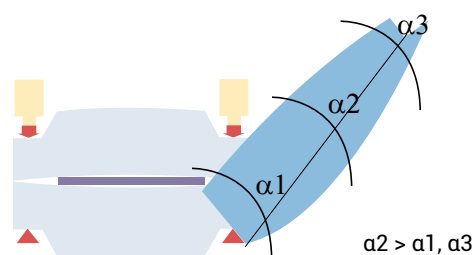
Bi-J / Bi-M

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

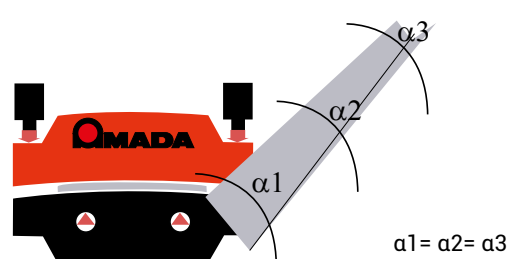
This removes the need for test bending and adjustment of the initial bend angle, eliminating scrap and reducing setup time.

BENDING PRECISION

CONSTANT ANGLE WITH PARALLEL BEAM DEFLECTION



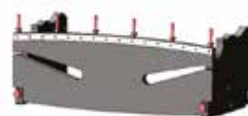
The bend accuracy of a press brake is affected by, amongst other factors, the deflection of the upper and lower beams. Conventional press brakes deflect in opposite directions. In fact, the penetration of the punch into the dies is not constant and the angle is not uniform along the length of the machine.



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.



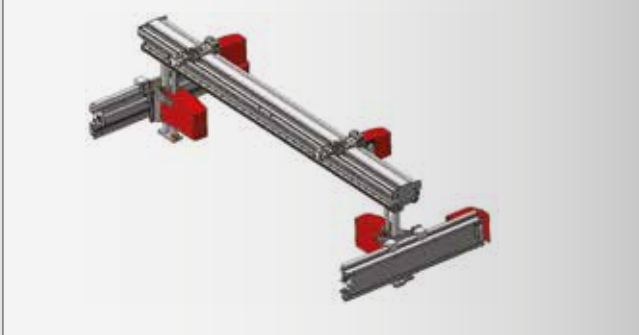
For higher tonnage versions the lower pins in the centre. This lower beam is secured to the machine frame by means of two pins in the centre of the lower beam, this allows for a certain degree of movement. Thus, when the cylinders exert the bending force at the extremities of the machine, the beam deflections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



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

ADAPTABLE PRODUCTIVITY

BACK GAUGES SYSTEM



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

A special back gauge is available for the HFE-5012 M2: 2 independent X, 2 independent Z and one R axis.

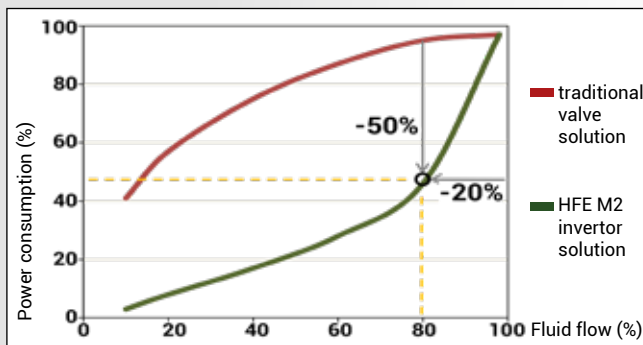


OPTION

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.

ENVIROMENTAL 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



LINE UP



HFE-5012 M2*



HFE-1703 M2**



HFE-2204L M2**

*HFE-5012 M2 has different functions/options compare to other models ** 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	2203	2204
Total length (L)	mm	2585	3490	3950	4535	4535	4565	5625	4565	5655
Total width (W)	mm	2190	2580	2580	2580	2620	2680	2620	2680	2620
Total height (H)	mm	2420	2440	2540	2680	2805	2880	2890	3185	3080
Machine mass	kg	3600	4700	5600	6600	8150	11600	13900	13750	17000

MACHINE SPECIFICATIONS

HFE M2		5012	5020	8025	1003	1303	1703	1704	2203	2204
Capacity	kN	500	500	800	1000	1300	1700	1700	2200	2200
Beam length	mm	1270	2090	2570	3110	3140	3170	4230	3220	4280
Beam width	mm	60				90	180			
Distance between frames	mm	1035	1665	2125	2705	2700	2700	3760	2700	3760
Throat depth	mm	100	420							
Open height	mm	480	470				470 (620)*	470		470 (620)*
Stroke	mm	150	200				200 (350)*	200		200 (350)*
Working height	mm	920	960							
Oil capacity	litre	85	55	110	110	100	160			
Power consumption	kW	5.5	6	9		12.5	16.5		20	
Approach speed	mm/s	185	100 (200)**			100				
Maximum bending speed	mm/s	15***	10 (15)****			10				
Return speed	mm/s	185	100 (150)****			100				

*(Long Stroke) ** HI-SPEED model *** depending on tonnage and Vdie **** HI-SPEED model, 75% tonnage limitation

Note: HFE-5012 M2 has different functions/options compare to other models. For further details please contact your sales subsidiary.
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.

AMADA UK LTD.

Spennells Valley Road,
Kidderminster,
Worcestershire DY10 1XS
United Kingdom
Tel: +44 (0)1562 749500
Fax: +44 (0)1562 749510
www.amada.co.uk

AMADA SA

Paris Nord II
96, avenue de la Pyramide
93290 Tremblay en France
France
Tél : +33 (0)1 49 90 30 00
Fax : +33 (0)1 49 90 31 99
www.amada.fr

AMADA GmbH

AMADA Allee 1
42781 Haan
Germany
Tel: +49 (0)2104 2126-0
Fax: +49 (0)2104 2126-999
www.amada.de

AMADA ITALIA S.r.l.

Via AMADA I., 1/3
29010 Pontenure
(Piacenza)
Italia
Tel: +39 (0)523 872111
Fax: +39 (0)523 872101
www.amada.it

