

# Press brakes HFE-M2 series



Press brake technology





## AMADA's successful press brake technology offers users more flexibility!

### Manufactured in Europe – for Europe

Press brakes from AMADA have been used successfully since 1955. During this time, approximately 90,000 units have been installed and AMADA has become a world market leader.

Through listening to our customer's requirements, and continuous product development, AMADA now offers the second generation of our European industry benchmark HFE press brake.

The most distinctive characteristics of the range are:

- Improved user friendly operation
- Energy saving features
- Increased user options

These in turn lead to high efficiency and profitability.





## Complete range to cover all your requirements

### The most important benefits at a glance

- Specially developed and manufactured in Europe for the European market
- Range consists of models with press forces from 50 to 220 tonnes and bending beam lengths of 1250mm to 4000mm
- New drive system with significantly lower energy requirements compared to conventional systems
- AMADA's proven instant reactive beam provides consistent bend angles
- Reliability and precision combined with lower service and maintenance requirements
- Extensive range of accessories for even more flexibility
- Innovative touch screen "AB-PAD" controller with remote diagnostics capabilities – Software updates possible via the internet
- Machine, tooling and process technology "from one source" – user support, operator training, spare part supply as well as maintenance and service direct from AMADA



SF-75 auxiliary bending device

### The intelligent HFE-M2 concept for a wide range of tasks

The features of the HFE-M2 series have been designed around the requirements of modern manufacturing needs. These include:

- Large open height
- Large throat depth
- Narrow lower beam
- Large distance between the side frames

As is the case with all press brakes from AMADA, the HFE-M2 series is equipped with AMADA's patented instant reactive beam which ensures constant parallel deflection of both the upper and lower beams. A constant bend angle along the full length of the machine is easily achieved.

The HFE-M2 is available with four or seven individually controlled axis. Both variants share:

- Y1-Left upper beam cylinder
- Y2-Right upper beam cylinder

4 axis variant has:

- X-Depth measurement
- R-Back gauge height adjustment

7 axis variant has:

- X1-Left axis depth measurement
- X2-Right axis depth measurement
- R-Back gauge height adjustment
- Z1-Left back gauge finger adjustment
- Z2-Right back gauge finger adjustment



## Bending with a new degree of freedom

### An energy saving inverter drive as standard

In conjunction with the HFE-M2 features already described, AMADA have incorporated a new drive system, the major benefits of this are:

- Up to 20% lower energy usage
- Reduced maintenance requirements
- Lower noise levels
- Increased reliability

These are achieved by a frequency inverter which controls the motor pump, only operating when necessary. It constantly monitors the bending requirements to self optimise.



### "AB-PAD" controller

The key advantages of the powerful, easy to operate "AB-PAD" controller are:

- Interactive touch screen
- Automatic program creation from a 2D representation of the workpieces
- Network ready
- Large program, tool and materials libraries
- Remote diagnostics capabilities
- Software updates via USB or internet
- Movable on three axes – adaptable to the requirements of the operator



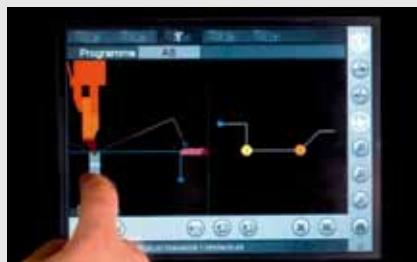
# AMADA – Your One-Stop-Shop

## Machines, tools, accessories and service

For decades AMADA has been a full provider for sheet metal processing: machines, user support, basic and advanced training, tools, accessories, software, spare parts and maintenance – at AMADA you get everything from one single source. This allows customers and users to increase productivity, achieve more efficiency, increase capacity and optimise production quality. AMADA is responsible for a comprehensive package of product technical expertise.

Although almost 90% of all bending tasks can be covered by standard tools, AMADA also designs and manufactures special tools for customers in-house.

The programming and tool databases of the HFE-M2 press series are compatible with other AMADA systems. Each controller contains editable tool and material libraries.



## DIGIPRO and Bending Indicator (BI-J)

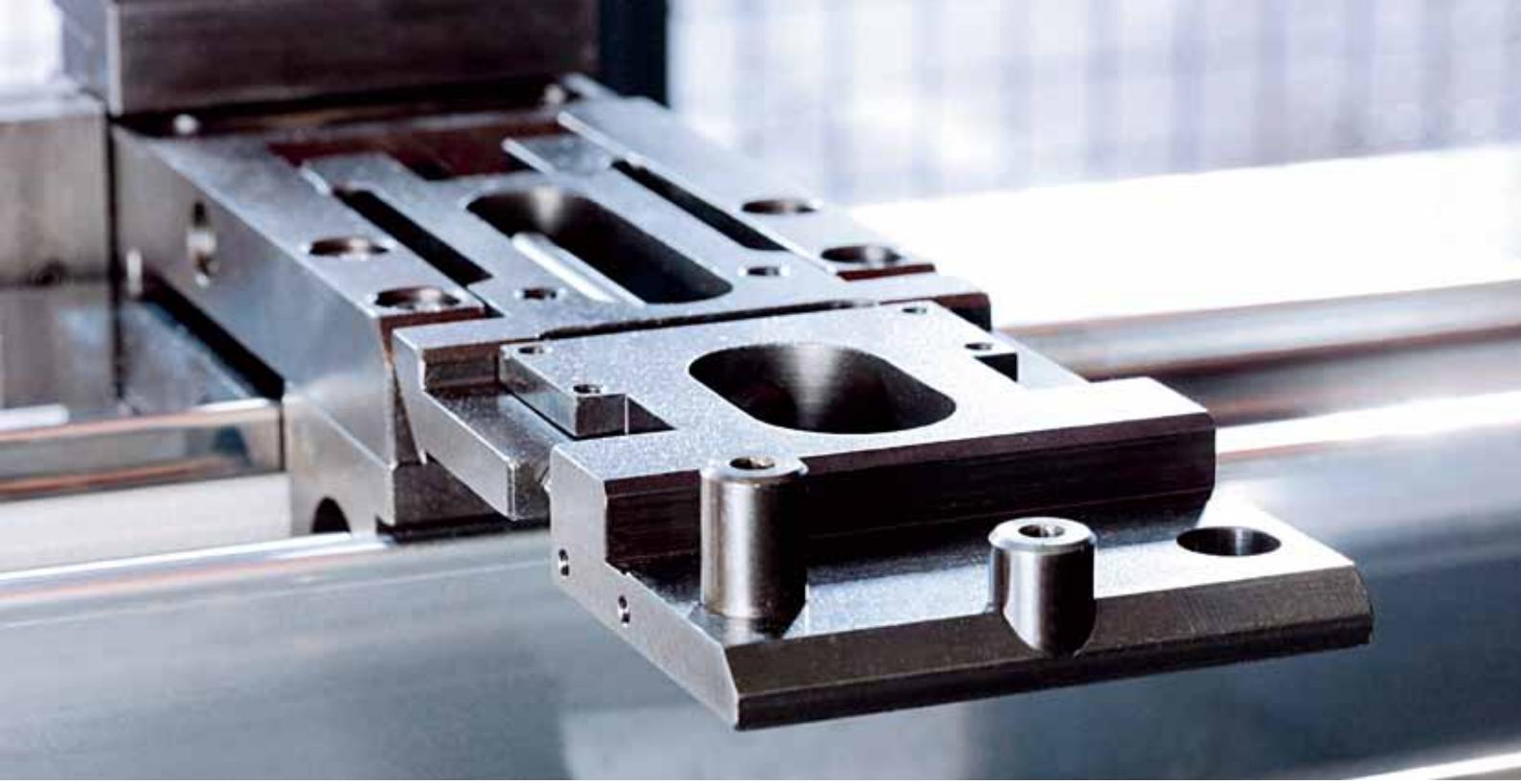
The smallest deviation in material thickness or tensile strength can have a detrimental effect on the bend angle. However, AMADA offers two different angle measuring systems to meet your diverse needs.

**DIGIPRO** is a handy, electronic angle measuring device that transmits the measured angle wirelessly to the NC via an infrared interface. In the event of deviation from the programmed set value, automatic correction takes place.

The **BI-J**, is implemented inline, measuring the bend angle and the spring back independently and regulates the necessary penetration depth up to the desired target angle. The BI-J is suitable for V-sizes of 6 to 40mm. The result is automatic, perfect precision – starting with the very first part.

**Safety for operation and production**  
The HFE-M2 series fulfils and is certified to, the requirements of modern safety technology according to EU standards. The press brakes can be equipped with two different optoelectronic safety systems:

- The traditional light curtain
- The AKAS III laser system



#### Long stroke – increased stroke and open height

Deep box bending requires a lot of space on the upper tool. AMADA also offers the HFE-M2 as a Long Stroke version to meet such diverse requirements. It has an open height of 620mm, a stroke of 350mm and achieves folding depths of over 300mm.

#### SF-75 Sheet Followers for controlled production

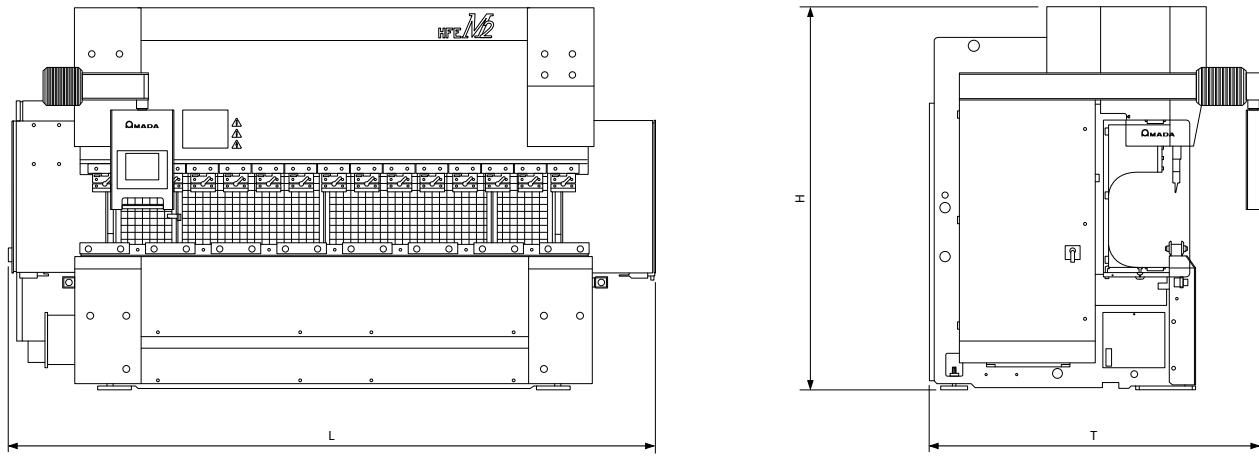
In the case of very heavy or large work pieces, sheet followers help to guarantee quality, significantly simplify the bending process and reduce operator fatigue. As a result, a second operator is often unnecessary. They are equipped with one or two arms and are driven by a servomotor. If not required for a particular job they are easily parked offline.

#### “Delta-X backstop option”

A Delta-X option is also available for the rear backstop of the 7-axis machine. This provides the stop fingers with an additional incremental adjustment of +/- 150mm in the X-direction. Both stop fingers can be set to different depth measurements – particularly helpful in the case of asymmetrical workpieces.

#### Maintenance and servicing

The HFE-M2 machine series requires minimal maintenance and is capable of remote diagnostics. This enables monitoring and diagnostics by AMADA which can then be analysed either by specialised service technicians or by the user themselves.



<b>HFE-M2 technical data</b>	<b>5012</b>	<b>5020</b>	<b>8025</b>	<b>1003</b>	<b>1303</b>	<b>1703</b>	<b>1704</b>	<b>2204</b>
Press force (kN)	500	500	800	1000	1300	1700	1700	2200
Press beam length (mm)	1270	2090	2570	3110	3140	3170	4230	4280
Distance between side frames (mm)	1035	1665	2125	2705	2700	2700	3760	3760
Throat Depth (mm)	100				420			
Standard stroke (mm)	150				200			
Stroke in Long Stroke version (mm)	—	—	—	—	350	350	350	350
Standard open height (mm)	370				470			
Open height in Long Stroke option (mm)	—	—	—	—	620	620	620	620
Beam width (mm)	60	60	60	60	90	180	180	180
Table height (mm)	960				960			
Approach speed* Y (mm/s)	1-100				1-100			
Bending speed Y (mm/s)	1-10				1-10			
Return speed Y (mm)	1-100				1-100			
Entire connected load (kW)	6	6	9	9	12.5	16.5	16.5	20
Mains voltage (V/Hz)	400/50				400/50			
Oil volume (l)	55	55	90	110	150	235	235	295
Number of controlled axes	4				4 or 7			
<b>Type A backstop</b>								
Adjustable range X-axis (mm)	—				700			
Adjustable range X-axis with laid on workpiece (mm)	—				750 / 1020			
Adjustable range R-axis (mm)	—				250			
Adjustable range Z-axis (mm)	—				Manual adjustment			
Adjusting speed X (mm/s)	—				270			
Adjusting speed R (mm/s)	—				90			
Positioning accuracy X (+/-mm)	—				0.1			
Positioning accuracy R (+/-mm)	—				0.1			
<b>Type B backstop</b>								
Adjustable range X-axis (mm)	—				700			
Adjustable range X-axis with laid on workpiece (mm)	—				750 / 1020			
Adjustable range R-axis (mm)	—				250			
Adjustable range Z-axis (mm)	—	1445	1900	2460	2460	2460	3500	3500
Adjusting speed X1 + X2 (mm/s)	—				500			
Adjusting speed R (mm/s)	—				160			
Adjusting speed Z1 + Z2 (mm/s)	—				1000			
Positioning accuracy X1 + X2 (+/-mm)	—				0.1			
Positioning accuracy R (+/-mm)	—				0.1			
Positioning accuracy Z1 + Z2 (+/-mm)	—				1			
<b>Type C backstop</b>								
Adjustable range X-axis (mm)	650				—			
Adjustable range X-axis with laid on workpiece (mm)	700 / 970				—			
Adjustable range R-axis (mm)	150				—			
Adjustable range Z-axis (mm)	manual				—			
Adjusting speed X (mm/s)	350				—			
Adjusting speed R (mm/s)	160				—			
Positioning accuracy X (+/-mm)	0.1				—			
Positioning accuracy R (+/-mm)	0.1				—			
<b>Dimensions and weights (transport dimensions)</b>								
Entire length (L) Standard (mm)	1415	2905	3365	3950	3950	3980	5040	5070
Entire depth (T) Standard (mm)	1615	1900	1895	1880	2075	2075	2075	2075
Entire height (H) Standard (mm)	2300	2450	2540	2685	2815	2900	2890	3085
Entire height (H) in Long Stroke version (mm)	—	—	—	—	3140	3140	3150	3270
Standard weight (kg)	3550	4850	5880	6910	8460	11910	14250	17450
Weight of Long Stroke version (mm)	—	—	—	—	9310	12710	14850	18350

In the interest of technological progress, we reserve the right to make any changes to technical dimensions, construction and equipment as well as illustrations. Specifications on accuracy in accordance with VDI/DGQ 3441. \*Workpiece precision and material thickness to be processed are also dependent on production conditions, material, type of workpiece, its pretreatment, size of the table as well as the location in the work area.

\* only with the implementation of suitable safety devices

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