

# Press Brake

Standard and Customized Solutions

The adira logo is displayed in white on a red background. The letters are in a bold, sans-serif font. The letter 'i' is unique, featuring a yellow vertical bar above its dot.

It's not where you are, it's where you're going.

**adira**

**MC MACHINERY  
SYSTEMS, INC.**  
a subsidiary of Mitsubishi Corporation



## About MC Machinery Systems

MC Machinery Systems customers get the best of both worlds: A single source for a diverse arsenal of manufacturing technologies and our expansive and knowledgeable support network. Our expertise spans virtually every aspect of metalworking—from simple fabrication to CNC-driven, automated manufacturing cells.

# Adira MC Partnership

## **MC Machinery Systems and ADIRA have formed a Partnership to Provide a Press Brake Line to North American Market**

MC Machinery Systems, Inc., a subsidiary of Mitsubishi Corporation, and ADIRA, a Portuguese manufacturer, part of SONAE CAPITAL portfolio, have formed a sales and service partnership to deliver quality press brakes throughout North America from 100 through 2000+ ton capacity machines.

MC Machinery Systems, Inc. now collaborates with ADIRA in to offer our more products at economical prices, while providing an extensive network of service and support. MC Machinery Systems, Inc. is headquartered in Elk Grove Village, Illinois, with offices in California, New Jersey, Texas, North Carolina, Ontario, Canada, and Queretaro, Mexico, with parts inventory above \$15 million. MC Machinery is well equipped to support all customers' needs that may arise.



ADIRA was established in 1956 in Porto, Portugal, manufacturing a variety of sheet metal working machinery. With over 162,000 square feet of production space, ADIRA is capable of producing hundreds of quality machines for export all over the world. ADIRA's commitment to innovation and continuous improvement has linked ADIRA's engineering department to universities and development institutes (University of Porto, MIT, INEGI, & INESC) in a network to develop and transfer innovations and knowledge.

The vast majority of ADIRA's production is exported to more than 60 markets world wide. Their solutions cover markets technically demanding as Northern European markets, North American markets, or emerging like South America, Asian, and African markets. Worldwide they have many references in companies like: NASA, US Navy, Boeing, Mitsubishi, Bombardier, Cessna, Air France, Tap Air Portugal, Bosch, Siemens, Motorola, Arcelor Mittal, Efacec, Alfa Laval, Thyssen, Carrier, SSAB, Caterpillar, and so many others . . .

# PA Series

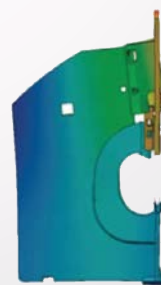


The PA series is designed to be flexible and reliable offering more standard features than other brands in their price point, with added benefits achieved by large open height, increased back gauge depth, a large C frame gap, and oil cooler as standard. The HEXA-C frame design ensures a perfect guiding of the upper beam even when under load. When compared to standard C frame press brakes the HEXA-C design has the largest immunity to structure torsion effects during off-center bending. The PA series are designed and manufactured per the strictest European standards for the price-conscious manufacturer. With a variety of configurations and options available, the PA series are suitable for any application.

## CONCEPTS



CONVENTIONAL



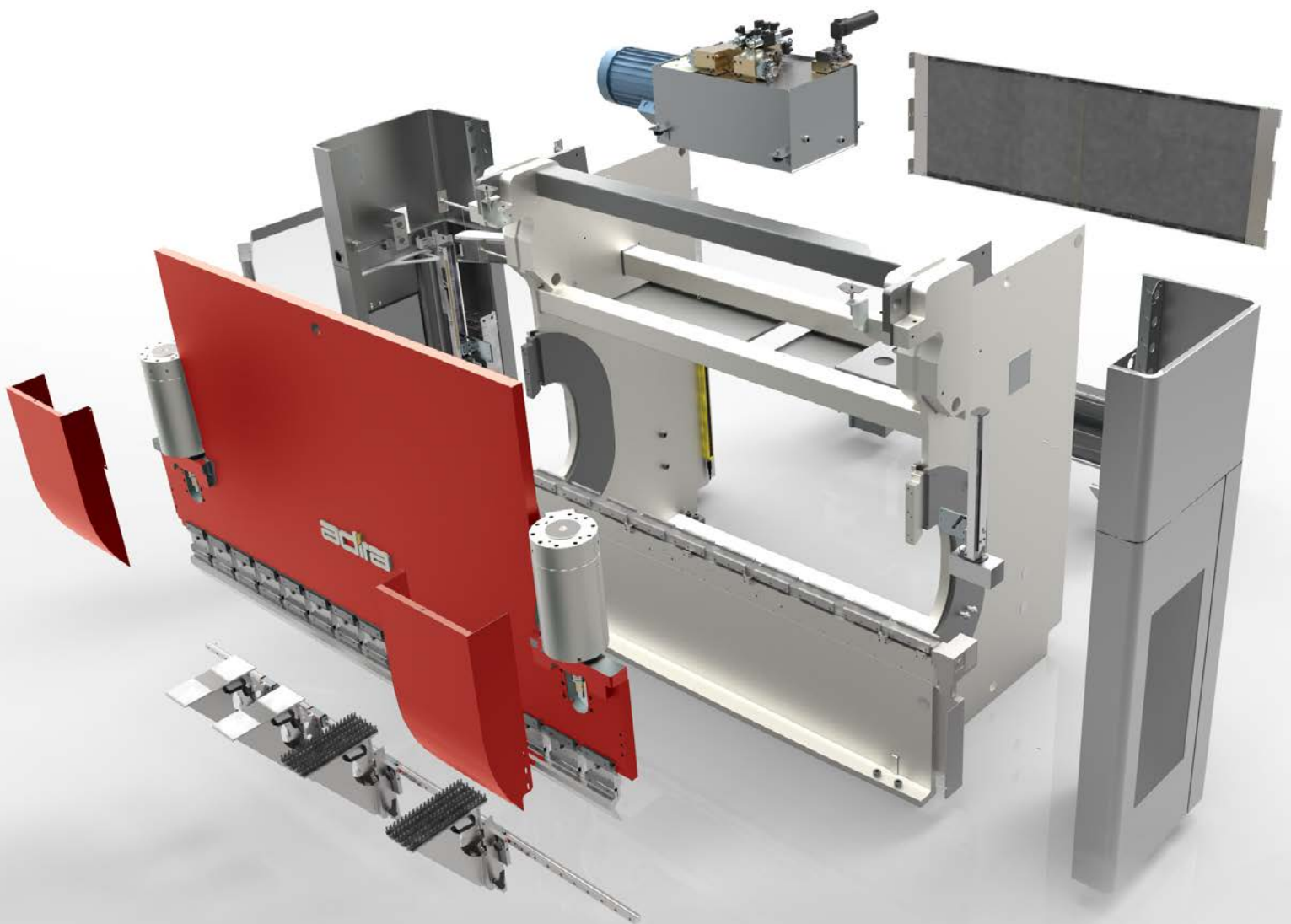
HEXA-C

ANGLE DEVIATION (°)						
	CONVENTIONAL			HEXA-C® TECHNOLOGY		
	LEFT	CENTER	RIGHT	LEFT	CENTER	RIGHT
T=3 mm V die 22 mm L=1000 mm	2	0.5	2	0.5	0.5	0.5
T=6 mm V die 50 mm L=1000 mm	1	0.5	1	0.5	0.5	0.5

# PA Distinctive Features

- Patented "Hexa-C®" structure
- Great energy savings with motor "Start/Stop" system
- Large open height, stroke, and throat depth
- Safety system by Lazer Safe
- User-friendly operation
- Fast and accurate Multi-axis back gauge
- Wide range of configurations
- Sturdy and reliable

**Available in six standard models  
135, 160, and 220 tons / 3 to 4 mts**



# PA Options

## PA Basic Standard Options



**CNC Adcontrol25**  
(15" Touchscreen)



**CNC Crowning Table**



**2 Axis Back Gauge**  
(4 fingers)  
**X, R**



**Front Support Arms**  
(With Brushes and  
Height Adjustment)

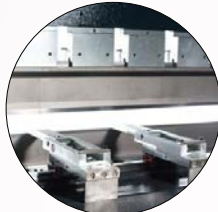
## PA Plus Standard Options



**CNC Adcontrol61**  
(15" Touchscreen  
with keyboard)



**CNC Crowning Table**

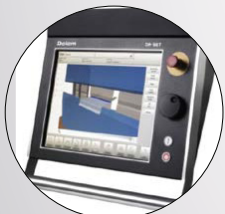


**4 Axis Back Gauge**  
**X, R, Z1, Z2**

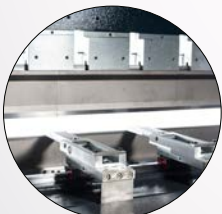


**Front Support Arms**  
(With Brushes and  
Height Adjustment)

## Additional Options



**Delem**  
**DA58T/DA66T/DA69T**



**Z1/Z2 Axis**



**X/X1 Axis**



**6 Axis Tower  
Back Gauge**



**Hydraulic Clamping**



**IRIS Block Laser  
and IRIS PLUS**  
(Angle Measurement System)



**Bending Followers**



**Leds Smart Placing**



# PA Technical Features

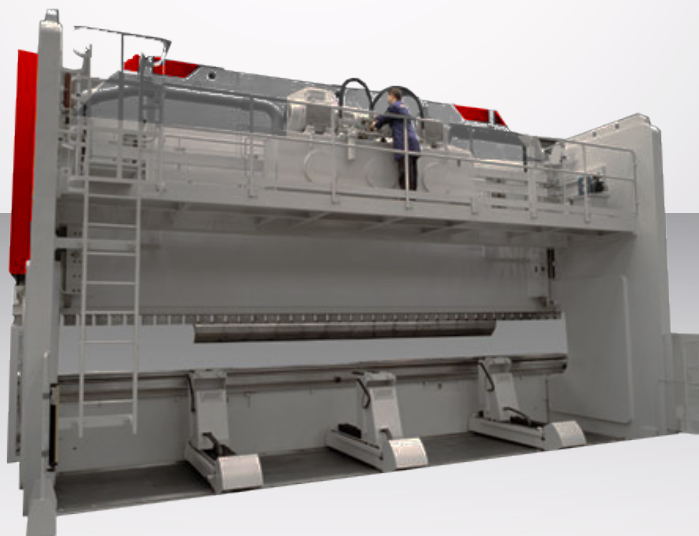
PA Basic		13530	13540	16030	16040	22030	22040
Capacity	kN	1350	1350	1600	1600	2200	2200
Bending length	mm	3000	4000	3000	4000	3000	4000
Distance between housings	mm	2550	3150	2550	3150	2550	3150
Max stroke	mm	260	260	260	260	260	260
Open height without tools	mm	500	500	500	500	500	500
Throat depth	mm	400	400	400	400	400	400
Approach speed	mm/s	150	150	150	150	130	130
Working speed	mm/s	10	10	10	10	8	8
Return speed	mm/s	100	100	100	100	85	85
Stroke of X axis	mm	625	625	625	625	625	625
Stroke of R axis	mm	200	200	200	200	200	200
Max. machine length	mm	4700	5780	4700	5780	4700	5780
Max. width	mm	2180	2180	2180	2180	2180	2180
Max. height	mm	2960	3120	2960	3120	3050	3120
Approx. weight	Kg	9100	11500	9300	11700	11200	13500

PA Plus		13530	13540	16030	16040	22030	22040
Capacity	kN	1350	1350	1600	1600	2200	2200
Bending length	mm	3000	4000	3000	4000	3000	4000
Distance between housings	mm	2550	3150	2550	3150	2550	3150
Max stroke	mm	260	260	260	260	260	260
Open height without tools	mm	500	500	500	500	500	500
Throat depth	mm	400	400	400	400	400	400
Approach speed	mm/s	150	150	150	150	130	130
Working speed	mm/s	10	10	10	10	8	8
Return speed	mm/s	100	100	100	100	85	85
Stroke of X axis	mm	625	625	625	625	625	625
Stroke of R axis	mm	200	200	200	200	200	200
Max. machine length	mm	4700	5780	4700	5780	4700	5780
Max. width	mm	2180	2180	2180	2180	2180	2180
Max. height	mm	2960	3120	2960	3120	3050	3120
Approx. weight	Kg	9100	11500	9300	11700	11200	13500

# PH Series



The ideal choice for maximum customization when forming heavy duty & long length work. Up to 2000+ tons 8 meters single piece press brakes with larger tonnage and longer lengths available. Tandem solutions also available for a highly customized offering.





# PH Distinctive Features

- High tonnage machines
- Long length forming
- Tandem solutions
- Special stroke, daylight, and throat
- Fully customized
- Sturdy, reliable, and safe
- The ideal solution for heavy duty work

**Available Models** (others under request):  
Ranging from 160 to 2000 tons / 3 to 8 mts



# PH Options

## PH Standard Options



**CNC Adcontrol61**  
(15" Touchscreen  
with keyboard)



**CNC Crowning Table**

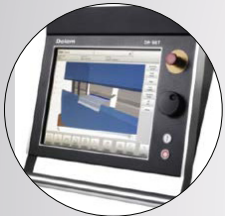


**2 Axis Back Gauge  
X, R**



**Oil Cooler**

## Additional Options



**Delem  
DA58T/DA66T/DA69T**



**Z1/Z2 Axis**



**X/X1 Axis**



**6 Axis Tower  
Back Gauge**



**Hydraulic Clamping**



**Bending Followers**



**Manual and CNC  
Variable Die**



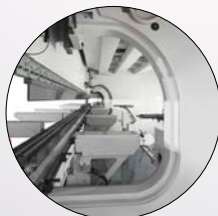
**Front Support Arms  
Heavy Duty**



**Front/Rear Support**



**Tandem solutions**



**Special Throats**



**Special Stroke and  
Open Heights**



# PH Specifications

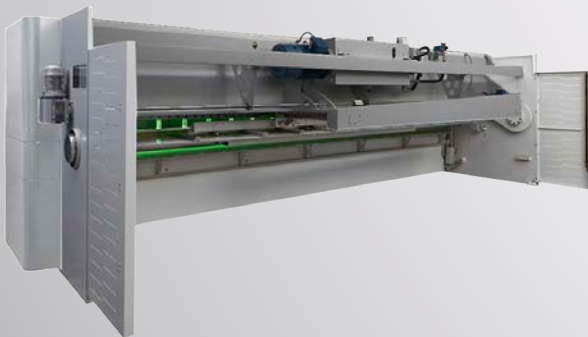
Model		PH 16046	PH 22060	PH 30040	PH 30060	PH 30070	PH 40040	PH 40060	PH 40070	PH 50040	PH 50060	PH 50070	PH 60040	PH 60060
Capacity	kN	1600	2200	3000	3000	3000	4000	4000	4000	5000	5000	5000	6000	6000
Working length	mm	6100	6100	4100	6100	7100	4100	6100	7100	4100	6100	7100	4100	6100
Distance between housings	mm	3150	5100	3150	5100	6150	3150	5100	6150	3150	5100	6150	3150	5100
Max. stroke	mm	250	250	250	250	250	250	250	250	250	250	250	300	300
Max. open height w/ tools	mm	500	500	530	530	530	530	530	530	530	530	530	600	600
Special stroke n.1	mm		400	400	400	400	400	400	400	400	400	400	400	400
Special stroke n.1	mm				630	630	630	630	630	630	630	630	630	630
Special stroke n.2	mm				500	500	500	500	500	500	500	500	500	500
Special stroke n.2	mm				800	800	800	800	800	800	800	800	800	800
Throat depth	mm	630	400	400	400	400	400	400	400	400	400	400	400	400
Special throat depth n.1	mm		630	630	630	630	630	630	630	630	630	630	630	630
Special throat depth n.2	mm			800	800	800	800	800	800	800	800	800	800	800
Special throat depth n.3	mm			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Motor power	kW	15	15	18	18	18	30	30	30	30	30	30	30	30
Approach speed	mm/s	150	130	150	150	150	150	150	150	80	80	80	80	80
Working speed	mm/s	10	8	8	8	8	9	9	9	8,5	8,5	8,5	7,5	7,5
Return speed	mm/s	120	85	100	100	100	90	90	90	75	75	75	75	75
Length	mm	7160	7000	4820	6550	7650	4400	6550	7650	4400	6550	7650	4400	6550
Width	mm	2260	2180	2380	2380	2380	2380	2380	2380	2380	2380	2380	2600	2600
Height	mm	3170	3540	3450	3500	3950	3450	3700	4050	3650	4280	4600	4200	4450
Workstation height w/ tools	mm	950	1050	950	1100	860	1000	860	860	1080	860	860	1100	860
Underfloor distance	mm					1500		1400	1900	1500	1900	1500		
Approx. Weight	kg	16500	24000	19000	35000	40000	25000	38000	44000	32000	45000	59000	42000	50000

Model		PH 60070	PH 80060	PH 80070	PH 110060	PH 110070	PH 110080	PH 135060	PH 135070	PH 135080	PH 135090	PH 160075	PH 200070	PH 200080
Capacity	kN	6000	8000	8000	11000	11000	11000	13500	13500	13500	13500	16000	20000	20000
Working length	mm	7100	6100	7100	6100	7100	8100	6100	7100	8100	9100	7500	7000	8000
Distance between housings		6150	5100	6150	5100	6150	6800	5100	6150	6800	8100	6200	5500	6500
Max. stroke	mm	300	300	300	300	300	300	300	300	300	300	640	300	300
Max. open height w/ tools	mm	600	600	600	700	700	700	700	700	700	700	1000	700	700
Special stroke n.1	mm	400	400	400	400	400	400	400	400	400	400			
Special stroke n.1	mm	630	630	630	800	800	800	800	800	800	800			
Special stroke n.2	mm/s	500	500	500	500	500	500	500	500	500	500			
Special stroke n.2	mm/s	800	800	800	900	900	900	900	900	900	900			
Throat depth	mm/s	400	400	400	400	400	400	400	400	400	400	640	500	500
Special throat depth n.1	mm	630	630	630	630	630	630	630	630	630	630			
Special throat depth n.2	mm	800	800	800	800	800	800	800	800	800	800	800		
Special throat depth n.3	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Motor power	kW	30	2x22	2x22	2x30	2x30	2x30	2x30	2x30	2x30	2x30	2x55	2x55	2x55
Approach speed	mm/s	80	80	80	80	80	80	80	80	80	80	70	80	80
Working speed	mm/s	7,5	7,5	7,5	6,5	6,5	6,5	6,5	8,5	9	9			
Return speed	mm/s	75	75	75	80	80	80	83	83	83	83	90	95	95
Length	mm	7650	6550	7650	6550	7650	8650	6550	7650	8650	9650	8700	8700	9700
Width		2600	2700	2700	2900	2900	3200	3200	3200	3200	3250	3500	3500	
Height	mm	4700	4600	4900	4700	5050	5430	5300	5600	5700	5900	5700	5120	5230
Workstation height w/ tools	mm	860	860	860	860	860	860	860	860	860	860	850	900	900
Underfloor distance	mm	2000	1750	2100	2000	2250	2400	2600	2850	2950	3025	2850	2800	2980
Approx. Weight	kg	64000	70000	79000	92000	112000	125500	100000	115000	127500	140000	150000	148000	155000

# GH Series



The GH series is the perfect solution for users that demand technology and quality with an accessible investment. With the Plus, the shear can evolve and increase its level of automation and productivity with the options available.



- Hydraulic swing beam shear
- Movable control station
- Different cutting capacity and lengths
- Easy to operate
- Proven reliability
- Designed, developed, and manufactured in Portugal
- High quality standards

# GV Series



For Heavy-duty jobs, the GV series is the ultimate solution for cutting capacities from 16mm to 25mm and up, with length options up to 6 meters. Fully customized solutions are available for productivity and automation.

- Cutting thickness up to 25 mm (more options on request)
- Sizes up to 6 meters (more options on request)
- Vertical cut with variable rake angle
- Hydraulic Swing back gauge
- Deep throat
- Sturdiness, reliability, safety
- The ideal choice for heavy-duty work



# GH Options

## GH Basic Standard Options



**NC Adiramatic  
4087**



**Bolsters With  
Ball Transfers**  
(Light beam shearing gauge)



**Ball Screw  
Back Gauge**  
(L=1000 mm)

## GH Plus Standard Options



**Cybtouch8  
Control**



**CNC Motorized  
Blade Gap**

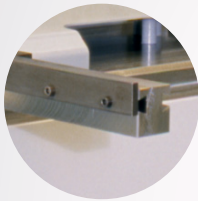


**Ball Screws  
Back Gauge**  
(L=1000 mm)

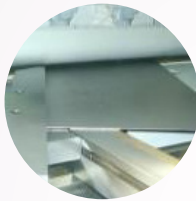
## GH Additional Options



**Thin Table  
Support**



**Special Front  
Support Arms**



**Bevel Gauged**



**Pallet Conveyor**



**Front Feeder  
AFX**

# GV Options

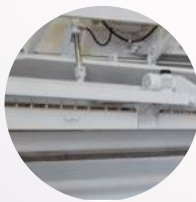
## GV Standard Options



**Cybtouch 8 Control**



**Bolsters With  
Ball Transfers**  
(Light beam  
shearing gauge)



**Ball Screw  
Back Gauge**  
(L=1000 mm)

## GV Additional Options



**Thin Table  
Support**



**Special Front  
Support Arms**



**SAT: Anti  
Twisting System**

adira



# GH Specifications

Model		GH 00420	GH 00630	GH 00640	GH 00660	GH 01030	GH 01040	GH 01330	GH 01340	GH 01360
Cutting Capacity										
Mild Steel (45daN/mm2)	mm	4	6.5	6.5	6.5	10	10	13	13	13
stainless steel (70daN/mm2)	mm	2.5	4	4	4	6.5	6.5	8	8	8
Cutting Length	mm	2,050	3,050	4,050	6,100	3,050	4,050	3,050	4,050	6,120
Frame Gap	mm	260	260	260	260	260	260	260	260	260
Rake Angle	degrees	11/6	11/3	11/3	11/6	2	11/2	2	11/2	12/5
Blade Clearance Adjustment	mm	0.05-0.6	0.05-1.1	0.05-1.1	0.05-1.1	0.05-1.1	0.05-1.1	0.05-1.1	0.05-1.1	0.05-1.1
Number of Holddowns	-	9	13	19	25	16	22	16	22	31
Back Gauge Range	mm	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Dimensions (CE - configuration)										
Length	mm	2,950	3,950	4,980	7,120	3,980	4,980	3,980	4,980	7,100
Width	mm	2,480	2,480	2,840	2,580	2,820	2,820	2,820	2,820	3,100
Transportation Width	mm	2,180	2,180	2,180	2,280	2,280	2,280	2,280	2,280	2,450
Height	mm	1,730	1,730	1,825	2,150	2,150	2,150	2,150	2,150	2,400
Approx. Net Weight	kg	5,900	5,900	8,100	15,000	10,000	13,500	10,000	13,500	31,000

# GV Specifications

Model GV		GV 1630	GV 1660	GV 2030	GV 2530
Shearing Capacity (Max. Cutting Angle)					
Mild Steel (45daN/mm2)	mm	16	16	20	25.5
stainless steel (70daN/mm2)	mm	10	10	14	17
Shearing Capacity (Normal Cutting Angle)					
Mild Steel (45daN/mm2)	mm	13	13	16	20
stainless steel (70daN/mm2)	mm	8	8	10	14
Cutting Length					
	mm	3,050	6,100	3,050	3,050
Frame Gap					
	mm	410	410	410	410
Rake Angle					
	degrees	2	11/2	2	11/2
0.5° to Nominal					
		2	1.5	2	2
0.5° to Max.					
		3.5	2.75	3.5	3.5
Blade Gap Adjustment					
	mm	0.05-2.5	0.05-2.5	0.05 - 3	0.05 - 3,5
Number of Holddowns					
	-	16	31	16	16
Holddown Force					
		45	76	58	95
Back Gauge Range					
	mm	1,100	1,100	1,100	1,100
Normal Cutting Angle					
		16 to 32	8 to 17	13 to 25	9 to 17
Max Cutting Angle					
		10 to 25	5 to 13	9 to 21	6 to 14
Dimensions (CE - configuration)					
Length	mm	4,150	7,240	4,170	4,250
Width	mm	2,370	2,370	2,370	2,370
Height	mm	2,550	2,770	2,550	2,730
Approx. Net Weight	kg	16,000	35,000	17,000	23,000



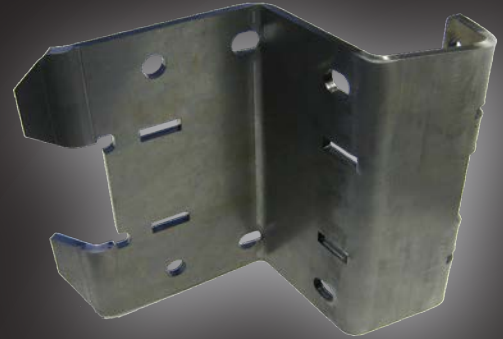
# DIAMOND BEND

## OFFLINE SOFTWARE

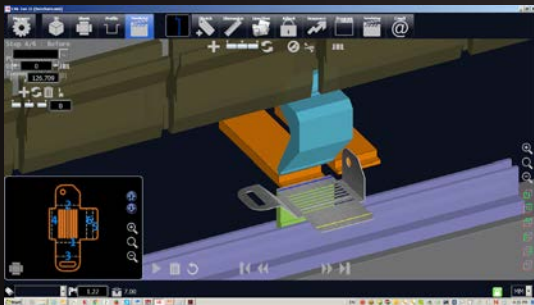
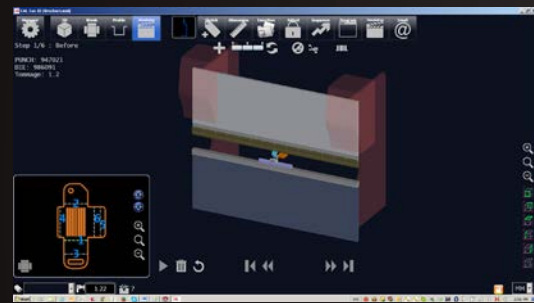


### “Know Before You Bend”

- ✓ Know You Have a Workable Design
- ✓ Know You Have the Accurate Flat Blank
- ✓ Know You Have the Tools for the Job
- ✓ Know You Have a Good Program and Setup



Eliminate Wasted Production Time from trial and error programming on the machine.  
DiamondBEND offline Press Brake CAM provides the ability to program and fully simulate the bending process before parts are laser cut and formed



### Key Features

- Automatic Tool Selection and Bend Sequencing
- Full Collision and Tonnage Checking
- Easy Editing of Bend Sequence and Machine/Tool Setup
- Utilize all Press Brake Tool Styles and Suppliers
- Build and Share an Accurate Bend Database
- Interfaces with SolidWorks, Inventor, and SpaceClaim CAD Systems
- Fully Integrated with New Murata Press Brakes



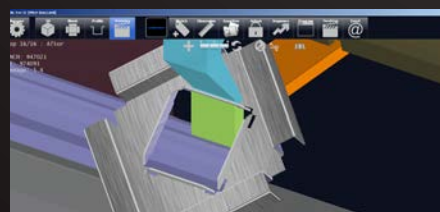
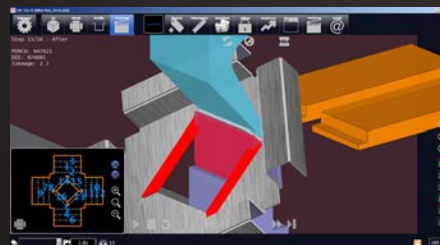
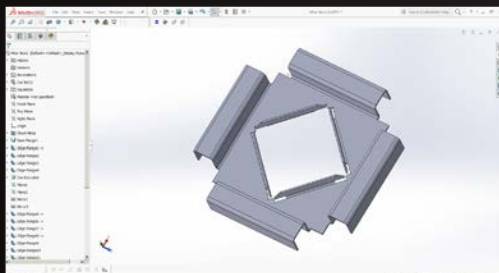
### Get Up To Speed

DiamondBEND is designed to be easy to learn and use, featuring a modern Game Style User Interface. This clear and uncluttered interface makes it easy to program and follow the bending process.

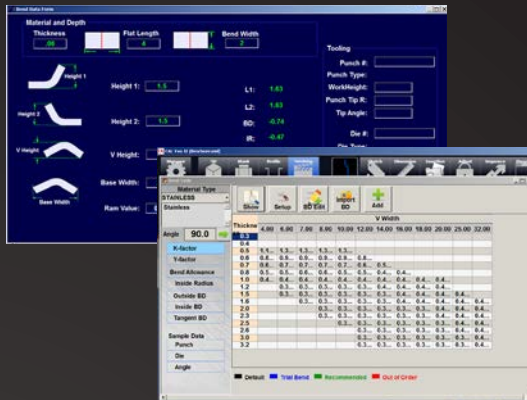


### Verify Your Design

DiamondBEND allows engineers and CAD operators to make a quick Go/No Go Bending Check to assure that their design is manufacturable with your tools and equipment.







## Get the Right Flat Blank

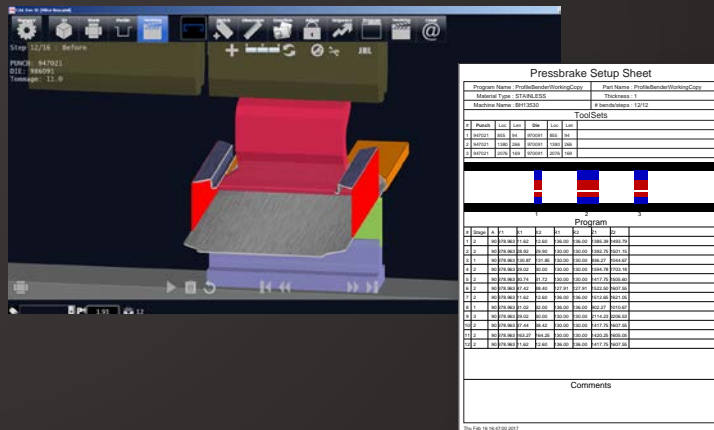


DiamondBEND provides a comprehensive set of tools for creating and maintaining an accurate bend database. Build your bending information based on sound real life bending experience. The database can be shared with your CAD system and Murata press brake controls for consistency and ease of maintenance.

## Organize Your Tooling



With DiamondBEND you can work with any tool supplier. We supply the standard online catalogs, you build your exact inventories. You can also design standard tools or import CAD geometry for special shapes. Use supplier's Catalogs to analyze new tools before purchasing



## Verify Your program



DiamondBEND allows for the full simulation of bend operations before parts are sent to your press brakes. Any collisions, tooling shortages and over tonnage conditions are detected offline avoiding mistakes and lost production on the shop floor. Tooling setup information can be viewed on the machine control or with paper reports

## DiamondBEND is part of the Mitsubishi Factory Network



### Plug in and take control of your Bending Operation

- Optional Features for Monitoring, Scheduling, and Controlling Production From Your Desktop
- Integrate and Coordinate with Upstream/ Downstream Operations
- Optimize Machine Loading and Work Flow
- Customized Shop Floor Documents Printed On-The-Fly



# Financing Solutions

**MAC FUNDING CORPORATION**

a subsidiary of  Mitsubishi Corporation

## **Simple, Fast & Easy**

Being a fellow Mitsubishi Corporation company, MAC Funding is an integral part of MC Machinery Systems. We work closely with MC Machinery to ensure every transaction is fast and simple, saving you time, effort, and most importantly money.

## **Fast Track**

For loans up to \$350,000, a signed loan application is all we need! The easy, one page application allows you to be approved within 24 hours. We also offer pre-approvals, allowing you to have your financing in place before you even decide on a machine!

630-860-4218 • [info@macfunding.com](mailto:info@macfunding.com)



 **OVER 60 SERVICE LOCATIONS IN NORTH AMERICA**

## **THE MOST RESPONSIVE SERVICE AND SUPPORT IN THE INDUSTRY**

With more than 200 employees, our regionalized Service Network is the most advanced and responsive team in the industry. We're here for you with phone support, operation training, on-site service, parts inventory, and a robust, interactive website.

From installation and on-site training to support and service throughout the life of your system, our national service network is just a phone call away. No other company has a greater depth of experience and resources than Mitsubishi and MC Machinery Systems. Access 24/7 support with our interactive website, a detailed interactive parts catalog, printable machine manuals, and software.

**MC MACHINERY  
SYSTEMS, INC.**

a subsidiary of  Mitsubishi Corporation

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All machines in this brochure may be pictured with optional equipment.