SERVO/HYDRAULIC PRESS BRAKE

HG Series

HG 5020, HG 8025, HG 1303, HG 1703
HG 1704, HG 2203, HG 2204

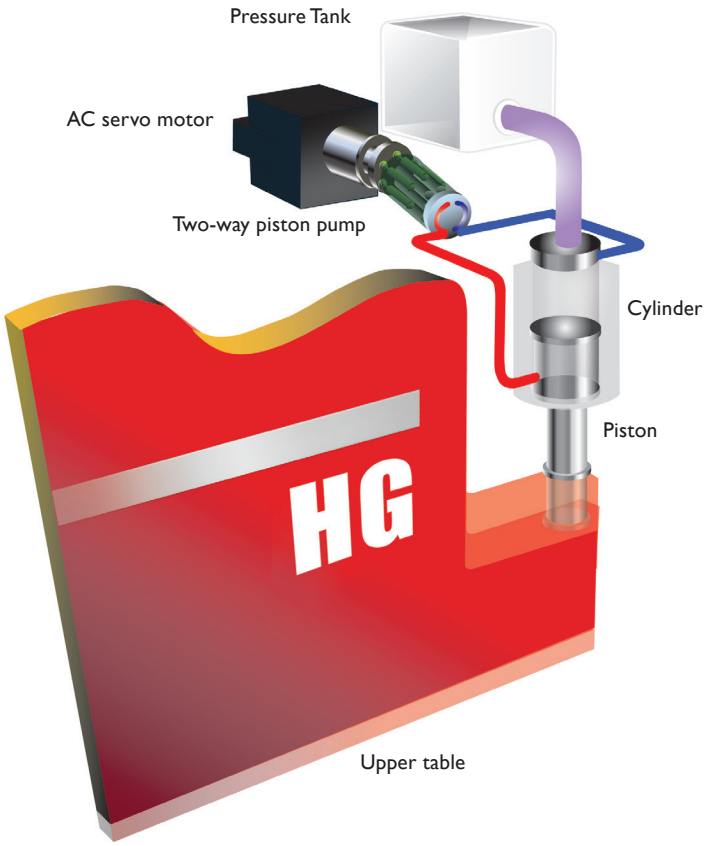
VPSS
Virtual Prototype Simulation System

AMADA

The HG Series Press Brake

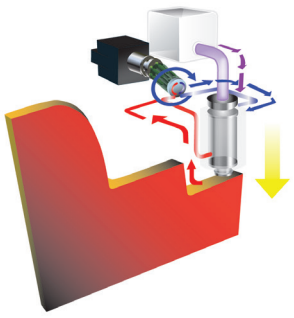
An ultra-high precision, high-speed compact bending solution featuring an advanced Dual Servo Power drive system providing the ultimate in bending control and accuracy.

Unique Hybrid drive System

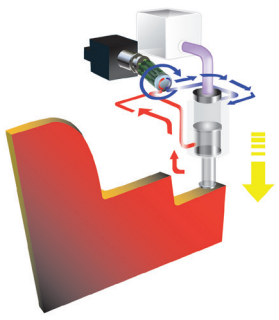


Independent AC-servo motors drive high efficiency, bi-directional hydraulic pumps

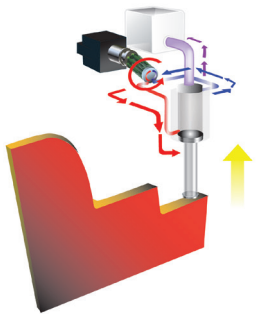
- Extremely fast approach, bending and return speeds provide faster cycle times and result in more parts per hour.
- Unequalled ram positioning. Repeatability of ±0.00004".
- Programmable ram tilting and 50% off-center bending capacity allows for quick setup of multiple stage part bending.
- Low power consumption – hydraulic pump motors are on only when the ram is moving.
- Stable hydraulic oil temperature ensures consistent angular accuracy.
- Less hydraulic oil and fewer oil changes required.
- Very low noise level.



Rapid lowering

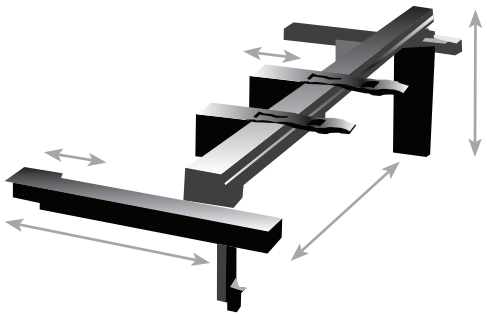


Bending process



Rapid rising

Multiple Axis Backgauge



- 6-axis backgauge speeds setup for complex parts.
- High-speed movement on all axes ensures that the gauge fingers are positioned as quickly as the operator positions the part.
- Independent servo drives for “L” axis allow tapered bends.
- Optional L-Shift feature is available.
- Tool navigator software positions backgauge where each tool needs to be installed, shortening the tool installation process.
- Unprecedented positioning repeatability ±0.0004".
- Low-profile design enables part positioning over the top of the backgauge.

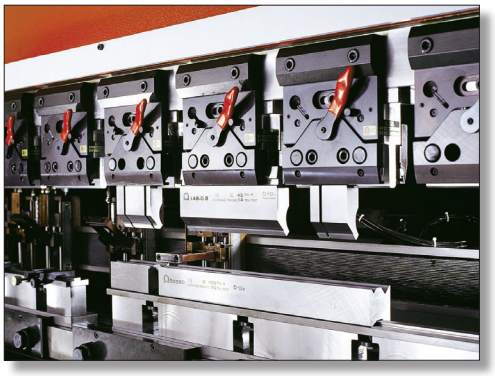
Dynamic Hydraulic Crown Bed

- Amada’s patented hybrid hydraulic crown bed design automatically provides consistent angular accuracy.
- Through pressure sensors, the AMNC3i’s Thickness Detection System (TDS) monitors the ram stroke, correcting the bend angle “on the fly” to minimize angular irregularities due to material thickness variation.
- Operators can program a complete workflow in one handling by staging tool setups anywhere along the bed.

AMNC3i – PC Control with Network Capabilities

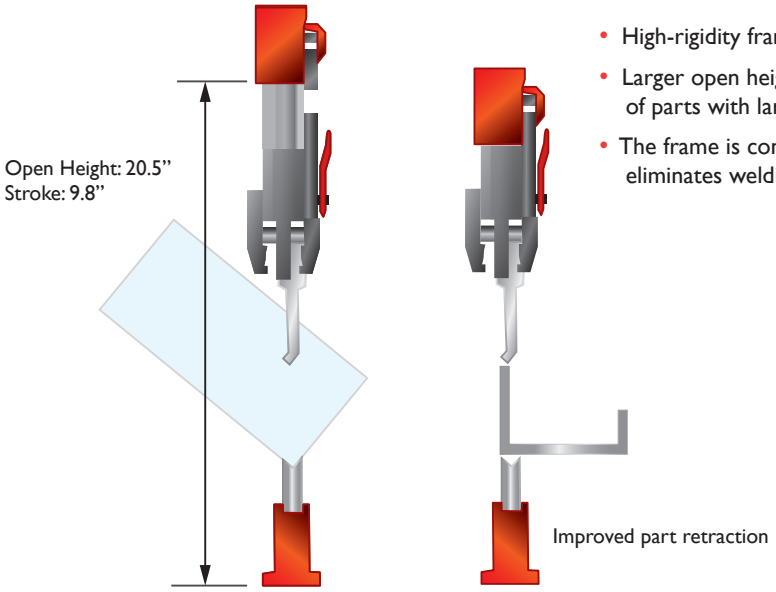
- User-friendly graphic interface and tool library assist operators in the quick setup of complicated parts.
- 18.5” multi-touch display offers multiple modes of data entry (angle, depth, 2D and 3D) for the utmost in programming flexibility.
- Automatic program creation from a 3D representation of the work piece.
- Amada’s SDD software database provides program storage on the control or on a server when the control is networked, allowing secure storage of machine setup and program data.
- Adjustment of all machine axes can be accomplished through use of control mounted handwheel.
- Built-in bar bode reader.
- Dual foot pedal ram control.

One Touch Punch Holders & Precision Ground Tooling



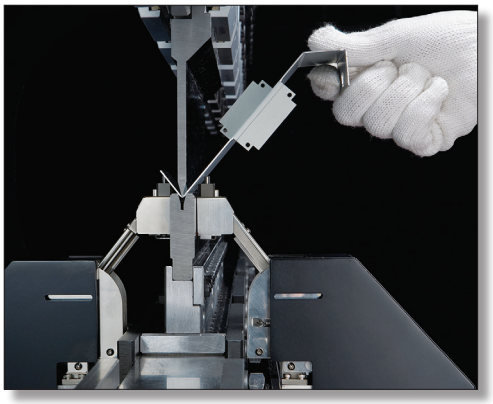
- Innovative "one touch" punch holders ensure faster tool setup.
- Lever rotation locks and seats punch into place – no need for a wrench.
- Precision-ground, sectionalized tools are easy to handle and eliminate shimming.
- Quick-change dies eliminate need for punch and die alignment.

High Rigidity & Larger Open Height



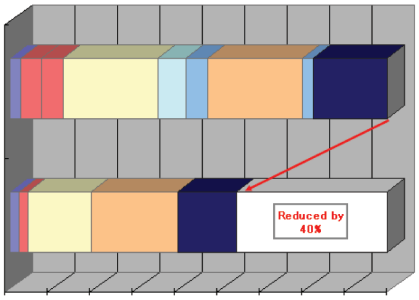
- High-rigidity frame allows for a larger open height and stroke.
- Larger open height allows deep box bending and easier retraction of parts with large down flanges.
- The frame is constructed from high-tempered steel plate and eliminates welding stress, ensuring long-lasting performance.

BI-S Bend Angle Sensor



- The BI-S is a high-speed, high-precision, probe-style bend angle sensor that measures and adjusts the bend angle "on the fly."
- Eliminates the need for test bending and adjustment of the initial bend angle eliminating scrap and reducing setup time.
- Automatic angle adjustment ensures high-quality production bending even when material thickness and hardness varies from part to part.
- Overcomes any environmental factor that affects bend angle to produce high-accuracy bends even if the operator lacks experience.
- Option available for all HG series press brakes.

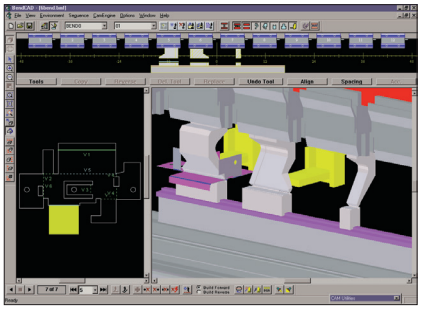
Dr. ABE Bend – Bending Simulation Software



- Increase press brake productivity by moving setup offline.
- Reduce cost-per-part.

Part #	Part		Explanation
15566			
15567			
15568			Insufficient Tooling
15569			No Tools In Stock
15570			
15571			Tooling Height
15572			
15573			
15574			
15575			

- Dr. ABE Bend selects tools, automatically creates tool layouts and bend sequences with a success rate of up to 80%.
- Manually program the remaining parts offline.



- Setup instructions stored on network are instantly available.
- AMNC3i control uses offline programs to reduce remaining internal setup.

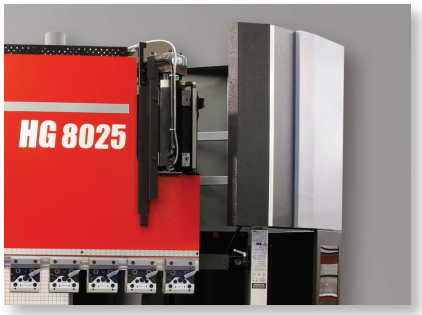
Improved Safety Standards

Emergency shut-off button on controller panel

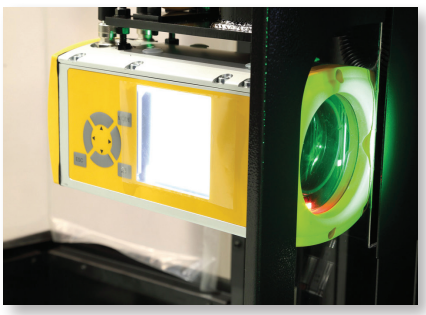
Interlock (OFF mode) on controller panel

To enhance performance while improving operator safety, HG Series press brakes come standard with emergency safety features.

- Emergency shut-off button cuts power to machine in case of sudden emergency.
- Interlock (Off mode) on the controller shuts off all axis movement.
- When the side or rear guards are opened, all axis movement immediatly stops.
- A Point of Contact Safety Device is standard on the HG - when the laser beam detects an obstruction below the punch, the ram stops.



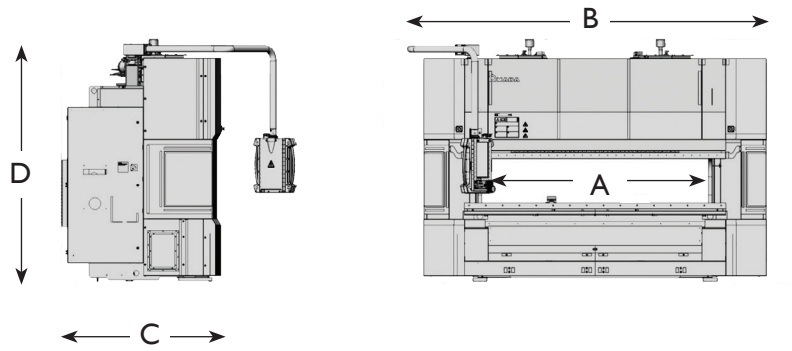
Axis movement stops when guard is opened



Laser guard device

Dimensions

(Refer to the chart below for individual machine measurements.)



Specifications

Model	HG 5020	HG 8025	HG 1303	HG 1703	HG 1704	HG 2203	HG 2204
Tonnage (US)	56	89	146	191	191	247	247
Maximum Bend Length	84.6"	102.4"	122.4"	122.4"	169.3"	122.4"	169.3"
Dist. Between Frames (A)	66.9"	87"	106.3"	106.3"	148"	106.3"	148"
Stroke Length	9.8"	9.8"	9.8"	9.8"	9.8"	9.8"	9.8"
Open Height (no holders)	20.5"	20.5"	20.5"	20.5"	20.5"	20.5"	20.5"
Throat Depth	17.7"	17.7"	17.7"	17.7"	17.7"	17.7"	17.7"
Machine Stroke	9.8"	9.8"	9.8"	9.8"	9.8"	9.8"	9.8"
Table Height	37.4"	37.4"	37.4"	37.4"	37.4"	37.4"	37.4"
Approach Speed	8.7"/sec.	8.7"/sec.	8.7"/sec.	8.7"/sec.	8.7"/sec.	8.7"/sec.	8.7"/sec.
Bending Speed	0.79"/sec.	0.79"/sec.	0.79"/sec.	0.79"/sec.	0.79"/sec.	0.79"/sec.	0.79"/sec.
Return Speed	9.8"/sec.	9.8"/sec.	9.8"/sec.	9.8"/sec.	9.8"/sec.	9.8"/sec.	9.8"/sec.
Number of Cylinders	2	2	2	3	3	3	3
Hydraulic Fluid Capacity	10 gal.	11 gal.	19 gal.	28 gal.	28 gal.	33 gal.	33 gal.
Machine Length (B)	121"	139"	159"	159"	206"	162"	209"
Machine Width (C)	95"	95"	95"	95"	95"	95"	95"
Machine Height (D)	111"	112"	121"	126"	126"	127"	127"
Machine Weight	12,125 lbs.	15,875 lbs.	25,355 lbs.	33,070 lbs.	39,700 lbs.	37,500 lbs.	44,100 lbs.
Nominal Supply Current	34 A	44 A	60 A	75 A	75 A	100 A	100 A
Provided Power	12 kVA	16 kVA	21 kVA	26 kVA	26 kVA	36 kVA	36 kVA
Backgauge Range	27.5"	27.5"	27.5"	27.5"	27.5"	27.5"	27.5"
Control Type	AMNC3i	AMNC3i	AMNC3i	AMNC3i	AMNC3i	AMNC3i	AMNC3i
Program Capacity	Unlimited via net	Unlimited via net	Unlimited via net	Unlimited via net	Unlimited via net	Unlimited via net	Unlimited via net
Possible Axis Under CNC Control	11	11	11	11	11	11	11
RAM	D1 & D2	D1 & D2	D1 & D2	D1 & D2	D1 & D2	D1 & D2	D1 & D2
Backgauge	L1 & L2	L1 & L2	L1 & L2	L1 & L2	L1 & L2	L1 & L2	L1 & L2
Backgauge Horizontal	Y1 & Y2	Y1 & Y2	Y1 & Y2	Y1 & Y2	Y1 & Y2	Y1 & Y2	Y1 & Y2
Backgauge Vertical	Z1 & Z2	Z1 & Z2	Z1 & Z2	Z1 & Z2	Z1 & Z2	Z1 & Z2	Z1 & Z2
Ram Repeatability	± 0.00004"	± 0.00004"	± 0.00004"	± 0.00004"	± 0.00004"	± 0.00004"	± 0.00004"
Backgauge Speed (L-axis)	1,181"/min.	1,181"/min.	1,181"/min.	1,181"/min.	1,181"/min.	1,181"/min.	1,181"/min.
Backgauge Speed (Y-axis)	3,543"/min.	3,543"/min.	3,543"/min.	3,543"/min.	3,543"/min.	3,543"/min.	3,543"/min.
Backgauge Speed (Z-axis)	787"/min.	787"/min.	787"/min.	787"/min.	787"/min.	787"/min.	787"/min.

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