

SERVO/HYDRAULIC PRESS BRAKE

# HDS NT Series

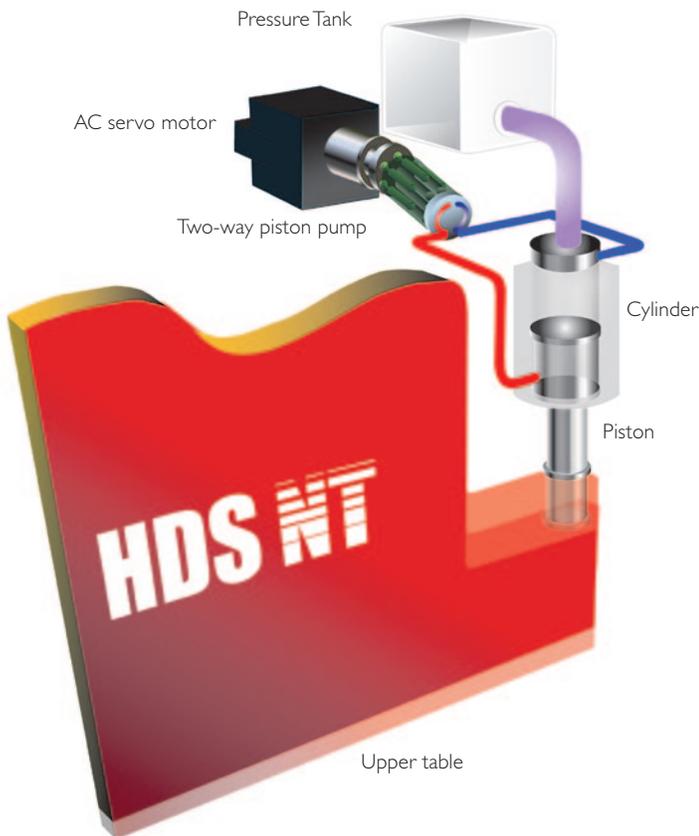
HDS 5020NT, HDS 8025NT, HDS 1303NT,  
HDS 1703NT & HDS 2204NT



# THE HDS NT SERIES PRESS BRAKE

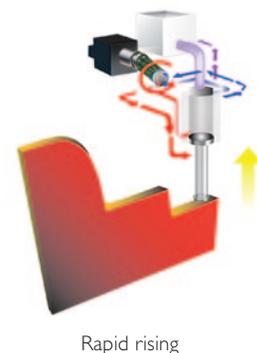
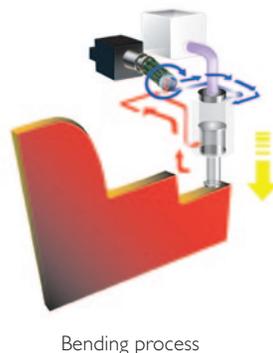
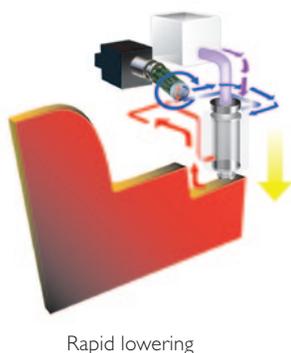
An ultra-high precision, down-acting system featuring advanced hydraulics that provide the ultimate in positioning accuracy.

## UNIQUE HYBRID DRIVE SYSTEM

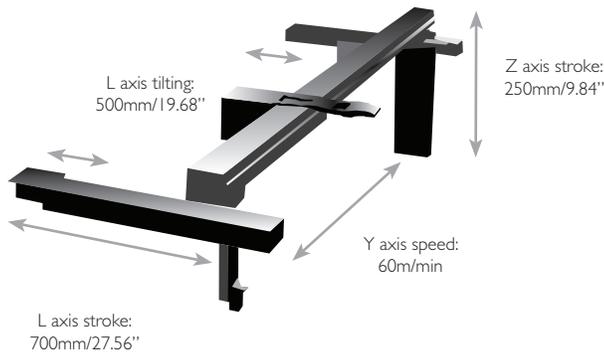


## Independent AC-servo motors drive high efficiency, bi-directional hydraulic pumps

- Extremely fast approach, bending and return speeds – provide faster cycle times and result in more parts per hour.
- Unequalled ram positioning. Repeatability of  $\pm 0.00004"$ .
- Programmable ram tilting and 50% off-center bending capacity allows for quick set-up 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.



## MULTIPLE AXIS BACKGAUGE



Specifications vary depending on machine model

- 5-axis backgauge speeds set-up 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.
- Tool navigator software positions backgauge where each tool needs to be installed, shortening the tool installation process.
- Unprecedented positioning repeatability  $\pm 0.0001$ ".
- Extended gauging allows for up to a 27.5" flange dimension.
- Low profile design enables part positioning over the top of the backgauge.

## CNC HYDRAULIC BED CROWNING



- Hybrid drive control of bed-crowning hydraulic cylinders.  
(Number of crowning cylinders varies depending on machine model)
- AMNC-PC control automatically calculates positioning of cylinders based on program data such as bend length, material type, thickness, tooling and part position along bed.
- Eliminates the time-consuming process of shimming tools caused by upper and lower bed deflection.
- For automatic adjustment, the control allows entry of actual bend angle (at ends and center of part). Adjustments are also possible by control-mounted handwheel.

## AMNC/PC – PC CONTROL WITH NETWORK CAPABILITIES



- Amada's AMNC-PC control with touch screen offers multiple modes of data entry (angle, depth, 2D and 3D) for maximum programming flexibility.
- Graphic tool library and tool set-up graphics assist operator in quick set-up of complicated parts.
- 3D graphics of machine, tooling and part, assist the operator in quick set-up and part sequencing/handling (available when machine is programmed offline with Amada's Dr. Abe Bend software).
- When the control is networked, Amada's SDD database software enables storage on the control or a server – providing secure storage of machine set-up and program data.
- Bar code scanner provides easy and immediate retrieval of Dr. Abe Bend programs from the network server.
- Adjustment of all machine axes can be accomplished through use of control mounted handwheel.

## ONE TOUCH PUNCH HOLDERS & PRECISION GROUND TOOLING



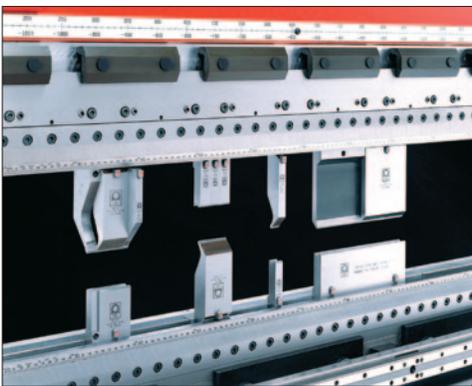
- Innovative “one touch” punch holders ensure faster tool set-up.
- Rotation of lever locks punch into place – no need for wrench.
- Precision ground, sectionalized tools are easy to handle and eliminate shimming.
- Quick change dies eliminate need to align punch and die when a die is changed.

## CS CLAMP



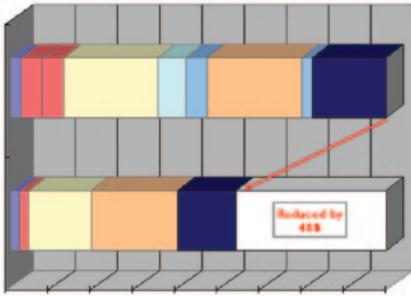
- Seat and secure punches with the turn of a single switch.
- One switch activates all of the punch holders across the bed of the machine.
- Load and unload sectionalized punches from the front of the holder.
- Increase safety with the drop-prevention mechanism.
- Punches stay secure in the holder with the clamps in the open position.
- Quick disconnect allows for easy removal of each punch holder.
- Safety mechanism allows for continuous clamping in the event of a power failure.

## MODULAR TOOLING SYSTEM

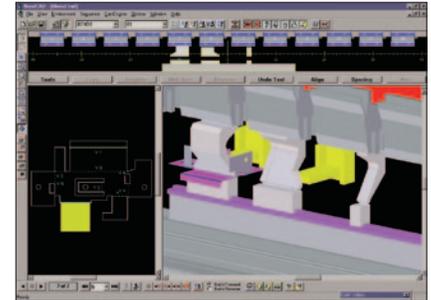


- Automatic Tool Alignment – upper and lower holders are hydraulically activated to align tools automatically (*no bolts to tighten*).
- Drop Prevention System – safety click buttons make tool changes safer and faster and protects tools from damage caused by dropping.
- Standardized Tool Heights – allow for more accurate stage bending and part repeatability.
- Punch and Die Reversibility – the ability to mount the punch in the lower beam and the die in the upper beam, provides greater versatility when forming complex parts.
- Reduced Set-up Time – the Amada Modular Tooling System is engineered to reduce set-up time by 80%.
- Easy Tool Selection and Positioning – all sections of tools are marked for quick identification. Tools are easily positioned by hand anywhere along the beam of the machine.

## DR. ABE BEND – BENDING SIMULATION SOFTWARE



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



- Free up press brake capacity by moving set-up offline.
- Reduce cost-per-part.
- 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.
- Set-up instructions stored on network are instantly available.
- AMNC-PC control uses offline programs to reduce remaining internal set-up.

## IMPROVED SAFETY AND REDUCED LABOR COSTS

To enhance performance while improving operator safety, HDS Series press brakes can be equipped with an automated Work Follower system.



HDS 2204NT  
with WS-4000

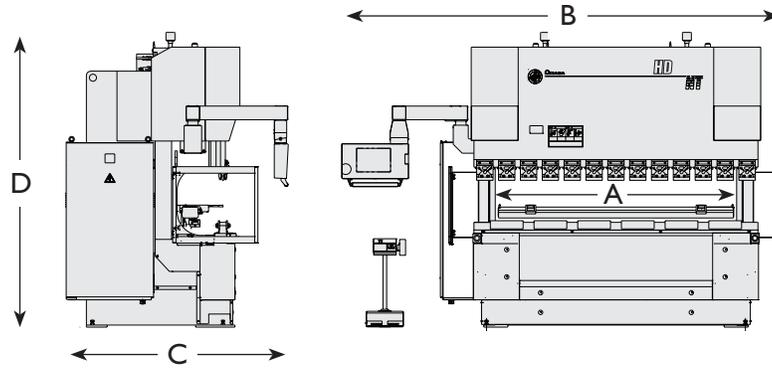


HDS 2204NT  
with WFN-150

- Sensor technology provides simple operation without the need for programming by the brake operator.
- After bending starts, an automated table follows and supports the material throughout the bending process – eliminating part deformation.
- Previously, processing large parts required two operators. The WF Series eliminates the need for a second operator while providing faster and safer transfer of material.
- Provides easy handling and processing of various part geometries.

## DIMENSIONS

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



## SPECIFICATIONS

Model	HDS 5020NT	HDS 8025NT	HDS 1303NT	HDS 1703NT	HDS 2204NT
Tonnage (US)	55	88	143	187	243
Maximum Bend Length	81.5"	102"	127"	127"	168.5"
Distance Between Frames (A)	66.9"	87"	106.3"	106.3"	148"
Stroke Length	7.87"	7.87"	7.87"	9.84"	9.84"
Open Height (with tool holders)	14.96"	14.96"	14.96"	15.78"	15.78"
Open Height (without tool holders)	19.7"	19.7"	19.7"	20.47"	20.47"
Throat Depth	16.3"	16.3"	17.7"	17.7"	17.7"
Table Height	38.6"	38.6"	39.4"	39.4"	39.4"
Approach Speed	7.87"/second	7.87"/second	7.87"/second	7.87"/second	7.87"/second
Bending Speed	0.78"/second	0.78"/second	0.78"/second	0.78"/second	0.78"/second
Return Speed	7.87"/second	7.87"/second	7.87"/second	7.87"/second	7.87"/second
Oil Capacity	9.9 gallons	9.9 gallons	17.8 gallons	33.4 gallons	33.4 gallons
Machine Length (B)	133.07"	154.33"	178.94"	183.07"	224.8"
Machine Width (C)	89.57"	89.57"	89.57"	97.05"	97.05"
Machine Height (D)	103.15"	107.09"	118.5"	126.57"	126.57"
Approximate Weight	11,600 lbs.	14,800 lbs.	26,400 lbs.	44,000 lbs.	50,600 lbs.
Motor Power	7.2 HP	11.7 HP	15.8 HP	27.6 HP	27.6 HP
Backgauge Range	27.55"	27.55"	27.55"	27.55"	27.55"
Backgauge Vertical Range	9.84"	9.84"	9.84"	9.84"	9.84"
Control Type	Amada AMNC-PC				
Program Capacity	Unlimited via network				
Axis Under CNC Control	8	8	8	8	8
RAM	D1 & D2				
Hydraulic Crowning	CC	CC	CC	CC	CC
Backgauge	L1 & L2				
Backgauge Horizontal	Y1 & Y2				
Backgauge Vertical	Z	Z	Z	Z	Z
Ram Repeatability	± 0.00004"	± 0.00004"	± 0.00004"	± 0.00004"	± 0.00004"
Backgauge Repeatability	± 0.0001"	± 0.0001"	± 0.0001"	± 0.0001"	± 0.0001"
Backgauge Speed (L-axis)	1,180"/min	1,180"/min	1,180"/min	1,180"/min	1,180"/min
Backgauge Speed (Y-axis)	2,362"/min	2,362"/min	2,362"/min	2,362"/min	2,362"/min
Backgauge Speed (Z-axis)	393"/min	393"/min	393"/min	393"/min	393"/min



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