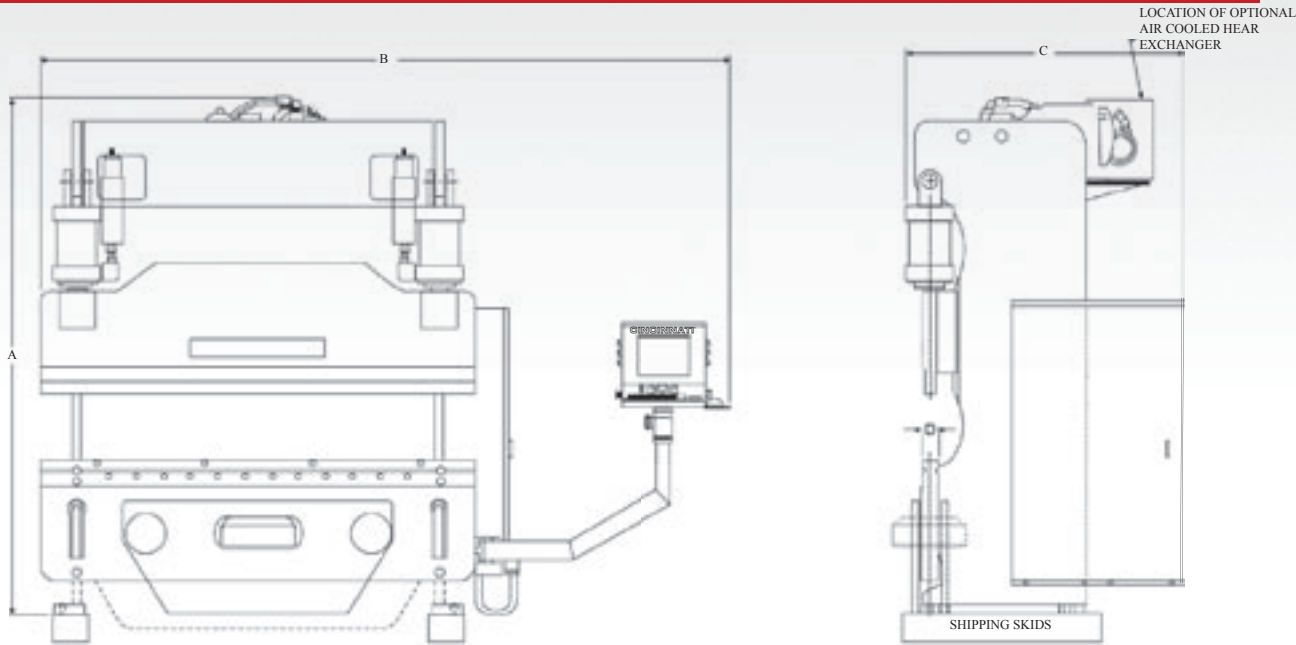


Specifications/Dimensions



Model	Distance between housings-in	Closed Height-in.	Stroke Length-in.	Open Height-in.	Approach Speed-ipm.	Forming Speed-ipm.	Return Speed-ipm.	Motor-HP	Height-in. (A)	Width-in. (B)	Depth-in. (C)	Bed Top Width-in. (D)	Domestic Shipping Weight-lbs
60AF+4	54	9	8	17	270	1 TO 120	1 TO 290	15	104	129	50	3.5	9,350
90AF+6	78.5	7	8	15	380	1 TO 120	1 TO 405	25	109.5	150	65	3.5	14,300
90AF+8	102.5	7	8	15	380	1 TO 120	1 TO 405	25	109.5	174	65	3.5	16,800
90AF+10	126.5	7	8	15	380	1 TO 120	1 TO 405	25	109.5	198	65	3.5	19,300
135AF+6	78.3	7	8	15	290	1 TO 80	1 TO 270	25	110.2	150	65	3.5	15,800
135AF+8	102.8	7	8	15	290	1 TO 80	1 TO 270	25	110.2	174	65	3.5	18,000
135AF+10	126.3	7	8	15	290	1 TO 80	1 TO 270	25	110.2	198	65	4.5	20,800
135AF+12*	150.3	7	8	15	290	1 TO 80	1 TO 270	25	110.2	222	65	4.5	24,800
175AF+6	78.8	7	10	17	260	1 TO 65	1 TO 290	25	123.5	150	67	4.5	19,500
175AF+8	102.8	7	10	17	260	1 TO 65	1 TO 290	25	123.5	174	67	4.5	22,000
175AF+10	126.8	7	10	17	260	1 TO 65	1 TO 290	25	123.5	198	67	4.5	25,500
175AF+12*	150.8	7	10	17	260	1 TO 65	1 TO 290	25	123.5	222	67	4.5	30,000
230AF+6	78.5	7	10	17	230	1 TO 45	1 TO 250	25	126.3	150	67	5.5	23,500
230AF+8	102.5	7	10	17	230	1 TO 45	1 TO 250	25	126.3	174	67	5.5	26,300
230AF+10	126.5	7	10	17	230	1 TO 45	1 TO 250	25	126.3	198	67	5.5	30,200
230AF+12*	150.5	7	10	17	230	1 TO 45	1 TO 250	25	126.3	222	67	5.5	34,500
350AF+8*	102	8	10	18	155	1 TO 30	1 TO 135	25	133.7	174	81	5.5	35,300
350AF+10*	126	8	10	18	155	1 TO 30	1 TO 135	25	133.7	198	81	5.5	39,600
350AF+12*	150	8	10	18	155	1 TO 30	1 TO 135	25	133.7	222	81	5.5	45,000
350AF+14*	174	8	10	18	155	1 TO 30	1 TO 135	25	133.7	226	81	5.5	53,300

\* Requires slot in floor

CINCINNATI® follows the policy of continuous advancement in product development. For this reason, specifications and dimensions are for reference only and can change without notice. Foundation plans are furnished with each new machine installation.

CINCINNATI®  
CINCINNATI INCORPORATED

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CINCINNATI®

AUTOFORM+





# AUTOFORM+

The CINCINNATI® AUTOFORM+ includes the following key features:

- ✓ High approach and forming speeds
- ✓  $\pm .0004''$  (3-sigma) ram repeatability
- ✓ PC operator control with visual work instructions
- ✓ Graphical tool library with pre-loaded tool files
- ✓ Touchscreen interface
- ✓ Machined ram nose with double hooked tongue
- ✓ CNC gage (4, 5 or 6-axis backgage optional)
- ✓ Automatic material thickness compensation
- ✓ Bend Simulation Module software (control and offline)
- ✓ Five-year machine warranty



Offline programming



Model 60AF+4  
Some optional items shown

[www.e-ci.com](http://www.e-ci.com)

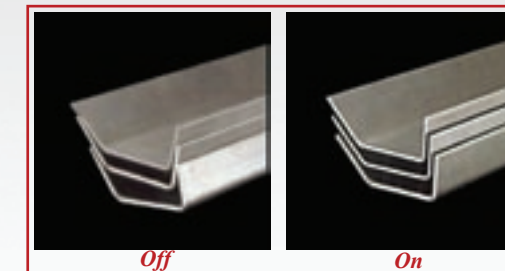
## Features / Options

### Standard Features

- ✓ Industrial computer based HMI control with Windows®
- ✓ 15" color LCD display with touchscreen interface
- ✓ Keyboard and pointing device
- ✓ Hard drive
- ✓ Ethernet and USB convenience outlets
- ✓ Forming modes: angle, tonnage, position, absolute position, angle/DTC
- ✓ Adaptive mode (standard with AUTO CROWN®)
- ✓ English / Spanish display
- ✓ Operator controls: one foot switch, one palm button station
- ✓ Programmable ram tilt
- ✓ Inch / Metric display
- ✓ Graphical tool library with pre-loaded tool files
- ✓ Bend simulation module (control and offline)
- ✓ Batch program operation
- ✓ Acronis True Image back-up utility
- ✓ Dual English/Metric scale on ram
- ✓ Automatic level control with dual .00002" resolution encoders
- ✓ Tonnage control with dual strain gages
- ✓ Full length dovetail slot in front and back of bed
- ✓ Bed machined for angle brackets
- ✓ Microcrowned bed
- ✓ Machined ram nose with double hooked tongue, die clamp bolts on 6" centers
- ✓ One set of die aligners
- ✓ Clevis mounted hydraulic cylinders with hardened piston rods
- ✓ Hydraulic oil and filters
- ✓ Management display information: counters, cycle time
- ✓ Maintenance messages, machine diagnostics, oil level / temperature sensing
- ✓ Web enabled machine monitoring
- ✓ E-mail notification of machine faults
- ✓ Electrical: 460/3/60
- ✓ Operator training at Cincinnati Incorporated
- ✓ 24" range backgage
- ✓ Paint – tech beige
- ✓ Five year parts warranty, one year labor, control and CNC gages

### Options

- ✓ Increased stroke, closed height, throat
- ✓ Bed and ram extensions
- ✓ Power clamp upper, lower
- ✓ Programmable AUTO CROWN®, CNC crownable filler blocks
- ✓ Filler blocks
- ✓ Voltage: 208/3/60, 230/3/60, 575/3/60
- ✓ Additional operator controls
- ✓ Programmable palm button / foot switch
- ✓ Presence sensing interface and device
- ✓ Area work light
- ✓ Pedestal mounted control
- ✓ Programmable outputs
- ✓ Robot interface
- ✓ Work supports - standard or fast setup
- ✓ 4, 5 or 6-axis backgage
- ✓ CNC plate gage, CNC front gage
- ✓ Bar code reader
- ✓ Air-cooled heat exchanger
- ✓ Heater unit for hydraulic tank
- ✓ Paint color
- ✓ Tandem configuration



Dynamic Thickness Compensation or  
optional Adaptive Mode



Optional increased closed  
height / increased stroke



Optional fast setup work supports



Optional CNC crownable filler block

[www.e-ci.com](http://www.e-ci.com)



# High Standards

## Machine Design

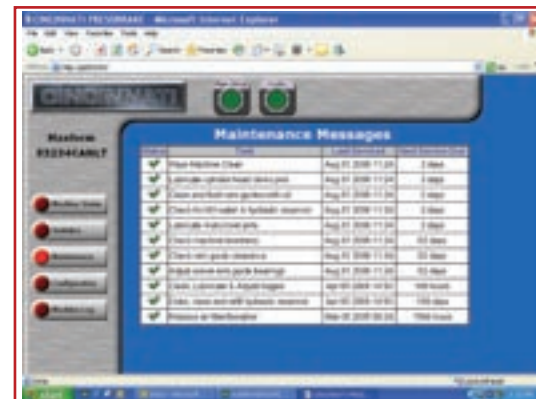
- ✓ Heavy-duty steel frame with interlocked construction eliminates load-bearing welds
- ✓ Linear steel ram guides and self lubricating slide liners
- ✓ Clevis mounted cylinders and hardened piston rods
- ✓ Large capacity hydraulic tank
- ✓ Manifold block hydraulics for simple maintenance
- ✓ Servo proportional valve ram control



60AF+4

## Safety Features

- ✓ Guarded foot switch
- ✓ Dual palm button operator station with E-stop and ram direction lights
- ✓ Hand/Foot sequence
- ✓ Tool overload protection
- ✓ On/Off operator key switch
- ✓ Tonnage and speed limited setup mode
- ✓ ANSI B11.3-2002 compliance
- ✓ Optional presence sensing device interface or factory installed presence sensing devices
- ✓ Redundant hydraulic circuitry



Web-based remote machine monitoring

## Support

- ✓ Field-based factory service representatives
- ✓ Technical service telephone support
- ✓ Part inventory located in Harrison, OH
- ✓ Web-based remote machine monitoring
- ✓ Operator and maintenance training programs available at Cincinnati Incorporated or at your facility
- ✓ Visit our Web site [www.e-ci.com](http://www.e-ci.com) for all the latest CINCINNATI information, software demonstrations or try the online tonnage calculator. CINCINNATI users are invited to register in the Customer Information Center to track parts orders, download software updates and manuals.



Customer information center

# Fast, Repeatable Setups

## Visual Work Instructions

The graphical control provides visual work instructions. Easy to understand instructions shorten the learning curve and reduce operator errors.



1. Open program

## PC Operator Control

The CINCINNATI operator interface was developed to provide fast, repeatable setups. Windows® based software and a touchscreen LCD display eliminate two-thirds of the programming steps compared to CNC controls. Saved programs, precision tooling and on-screen setup information allow operators to setup the same way every time.

The detailed job setup screen displays setup notes, tool names and tool locations. Scrap caused by handling errors is reduced as 3D part views will guide the operator through each step of the bend sequence. Bend simulation can be performed offline or at the machine to check for interference and create programs without trial and error bending. Now, even inexperienced operators can bend complex parts with confidence.



2. Review setup information, install tooling



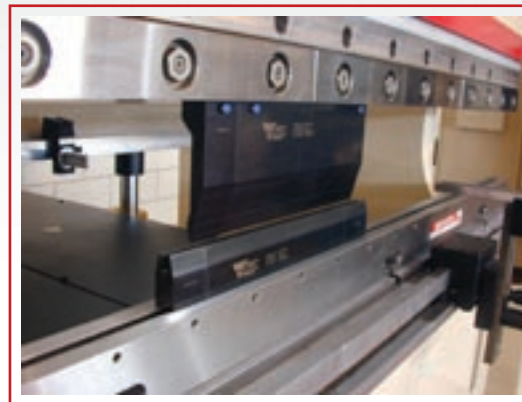
3. View part handling



## Quick Tool Change and Crowning

### Precision Tooling

The Autoform+ provides improved clamping and compatibility with precision sectionalized tooling. Sectionalized tools are clamped in the ram with die clamp bolts on 6" centers. The ram nose is machined with a double-hooked tongue slot allowing tools with a safety tongue to be easily reversed. A dual English/Metric scale on the ram nose helps operators install tools quickly and accurately as indicated on the control.



Precision tooling

### Power Clamping

Setup time can be dramatically reduced with the addition of hydraulic clamping on the ram and bed. The CINCINNATI® Power Clamp system integrates hydraulic power from the press brake and powerful spring washers to quickly change dies without the use of hand tools. With the CINCINNATI® power clamp system, tools remain securely in place even in the event of a power failure or total loss of hydraulic pressure.



Optional CINCINNATI® power clamp

### Crowning

On long parts, bed and ram deflection can cause angular variations along the bend. The standard Microcrown machined into the bed produces a parallel bed and ram at two-thirds of the machine capacity.

The optional AUTO CROWN® cylinder located in the bed produces an upward force proportional to the forming load improving angular consistency along the bend line. CNC Crownable Filler Blocks are also available options.



Optional AUTO CROWN®

AUTO CROWN® is a registered trademark of Cincinnati Incorporated

## Backgages



SX backgate for 60AF+4



CNC backgate for 90 - 175 ton, 6' and 8' machines



CNC Heavy Duty backgate for all 10' - 14' machines



Optional 4 or 6-Axis backgate

### Optional 5-Axis Backgate

The CINCINNATI® low profile 5-Axis backgate provides fast positioning speeds, flip backgate fingers with hardened dowel pins, 40" gage points and auto flange correction.



Flange correction input