

# Accell H

HYBRID TECHNOLOGY



## ACCELL H Hybrid Technology

### 60 Ton Model

Accurpress offers a full line of **HYBRID** machines commencing with a 60-ton X 4-foot length model specifically designed to address high precision finesse jobs and for those looking at energy cost-saving advantages. This smart and accessible machine is packed with features including the revolutionary ALLY backgauge, optional dual screens and intelligent design concepts to make this a **big winner** for sheet metal forming.

#### COMPACT DESIGN

Easily relocate the machine with a forklift!

#### LIGHT CURTAIN RAM INITIATION/GUARDING

Gain protection and productivity with this Smart System. Simply pass an object thru the light curtain and back out to trigger each bend cycle. Can be used in conjunction with the foot pedal. All the safety functions of the light curtain continue to meet applicable safe operating guidelines.

#### 16" THROAT

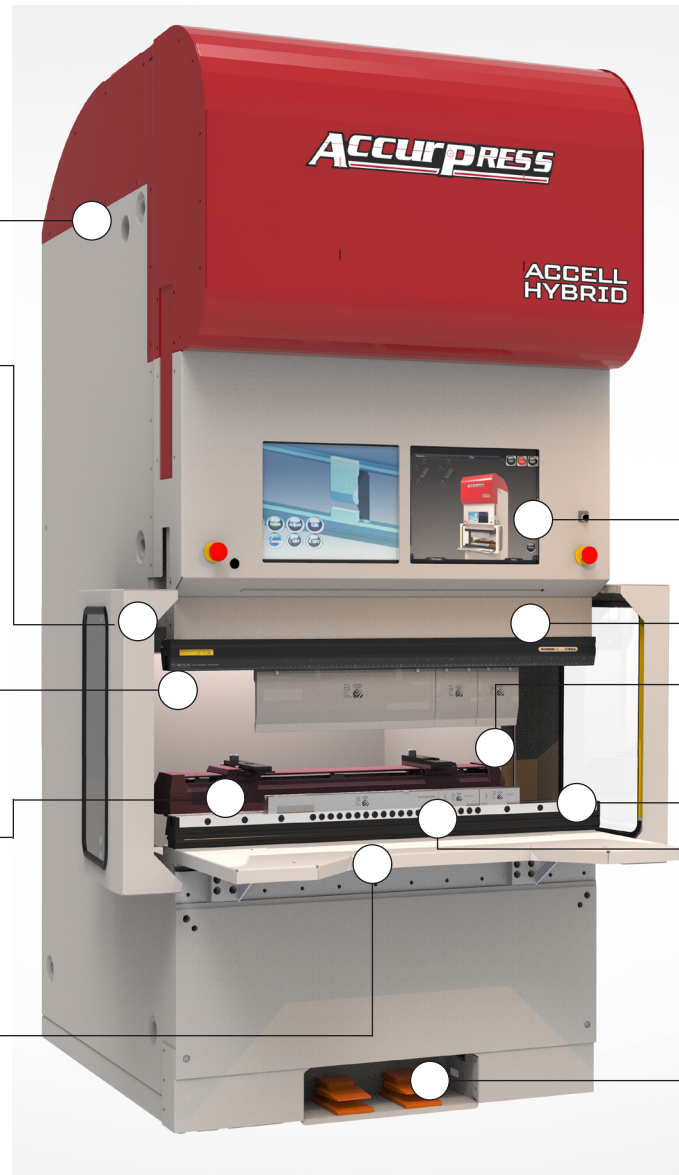
A large side depth increases flexibility with forming larger parts.

#### HIGH SPEED BENDING

The 60-ton Hybrid is designed with high speed ram activation including double bending speed when forming up to 50% of the maximum tonnage.

#### WORK TABLE

The work table provides a useful working space for the operator during forming. The table can be folded down when not in use.



## MACHINE CONTROLS

The 5604-H model includes the Vision control imbedded into the front of the ram for accessibility and convenience. Refer to page 6 for **optional** control screen offerings.

## HYDRAULIC RAM CLAMPING

All Hybrid models come standard with an American hydraulic ram clamping system. An optional New Standard Ram Clamping System is also available..

## ALLY 4 AXIS BACKGAUGE

Specifically designed for the 60 ton machine, the Ally 4-axis CNC backgauge (X, R, Z1/Z2) comes standard with three finger rests and full range of motion across all axes. (Optional Ally 5-Axis model available)

## MATERIAL COMPENSATION

Hybrid models also include a built-in Material Thickness Sensing System to provide real-time positioning adjustments to compensate for minute variances in metal thickness that can affect the bending accuracy.

## BOTTOM DIE HOLDER

The included Die Holder comes with localized dials for miniscule adjustments to consistently produce excellent quality and highly precise forming.

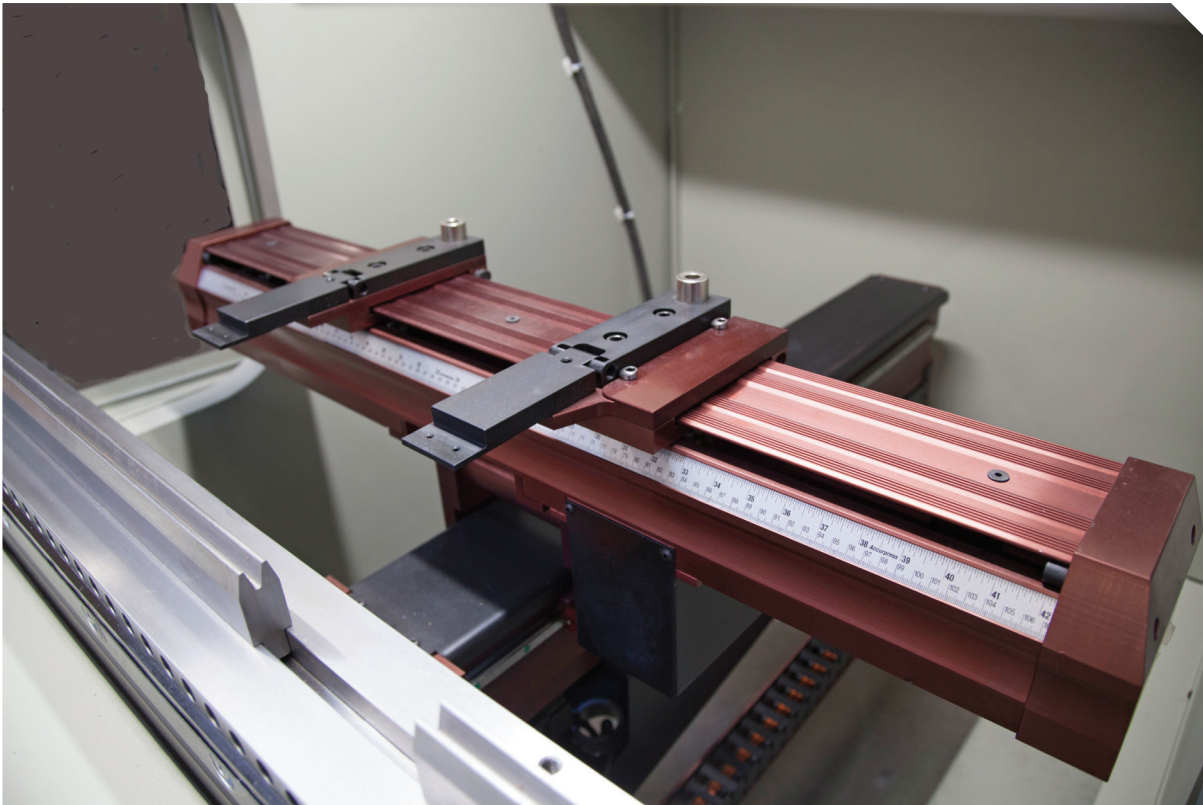
## RECESSED FOOT PEDAL

The foot pedal is mounted under the bed of the press brake and is extendable to 3 positions from under the bed. An optional external foot pedal in addition to the pedal mounted under the bed is available as an **option** ... or...an external foot pedal in lieu of the unit mounted under the bed may be requested.

## ACCELL HYBRID 60 Ton Backgauge

Accurpress offers the 60 Ton backgauge with either an Ally 4-Axis (X,R,Z1/Z2) or Ally 5-Axis (X,Xr,Z1/Z2) version to meet forming challenges in light precision sheet metal environments. These gauging systems are installed in the body of the machine and provide varying levels of flexibility and automation.

### ALLY 4-AXIS



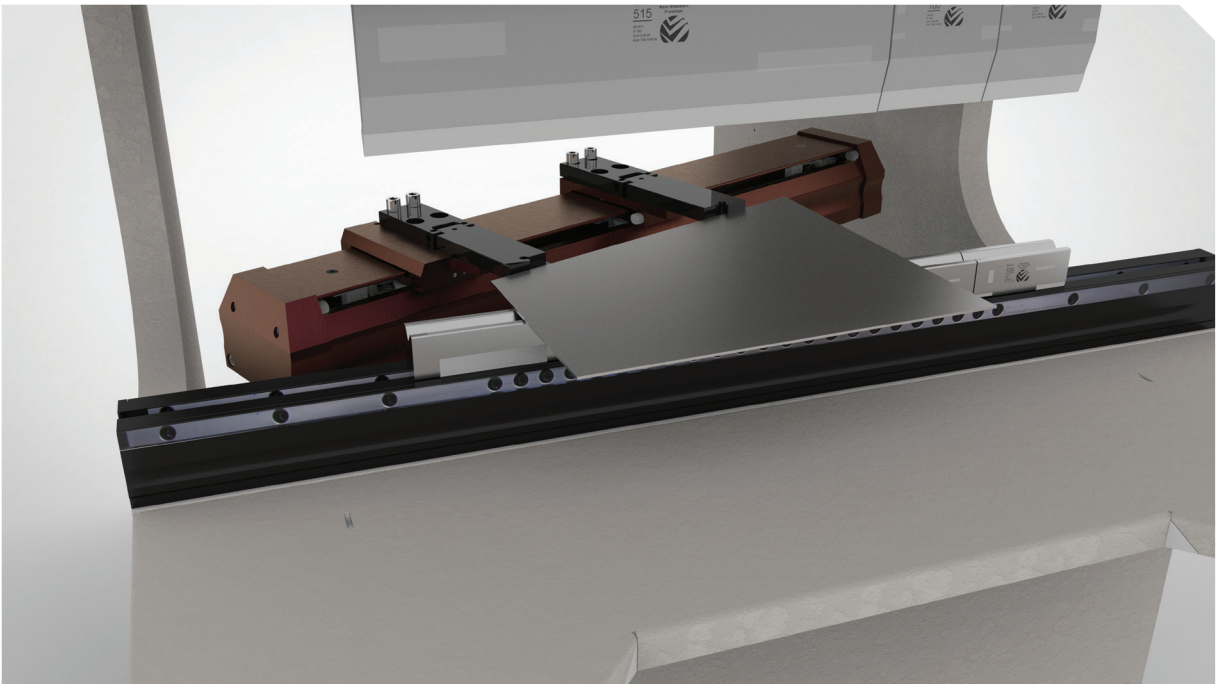
The Ally 4-axis backgauge has powered X,R and Z1/Z2-axes. This gauge is ideal for parts with parallel bend lines to part edges. Powered R and Z1/Z2-axes allows for automatic gauge positioning, particularly with stage bending.

#### NOTE

All programming is fully supported in the Vision Control.



**ALLY 5-AXIS**



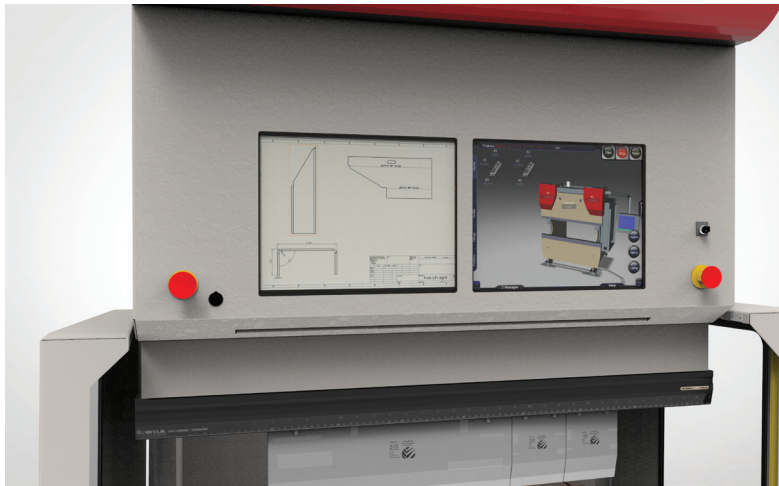
The Ally 5-axis backgauge has all the benefits of the Ally 4-axis, with the addition of the 5th Xr-axis. This is the backgauge motion where the main Z bar can rotate clockwise or counterclockwise 30 degrees in order to gauge parts with non parallel bend lines. The two backgauge fingers are built with cut outs and corner notches to better assist in offset gauging.

**NOTE**

The Ally 5-axis offset gauge feature is fully supported in the Vision control.

<b>ALLY BG SPECIFICATIONS</b>				
	<b>X-Axis</b>	<b>R-Axis</b>	<b>Z1/Z2-Axes</b>	<b>Xr (5-Axis)</b>
<b>Axis Travel</b>	30"	13"	36"	+/- 30 Deg
<b>Positioning Speed</b>	900 ipm	900 ipm	900 ipm	30 Deg/sec
<b>Position Repeatability</b>	+/- 0.001"	+/- 0.001"	+/- 0.001"	+/- 1 Arc-min

## ACCELL HYBRID 60 Ton Control Options

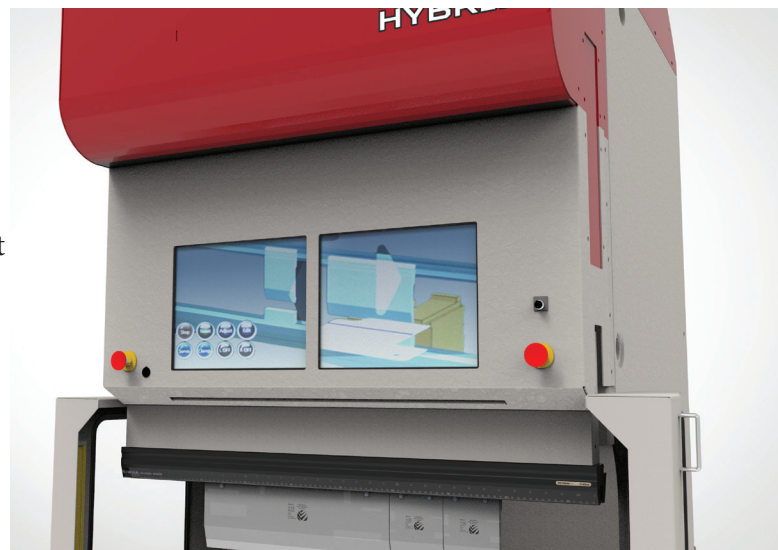


### SECOND SCREEN (60 Ton Model)

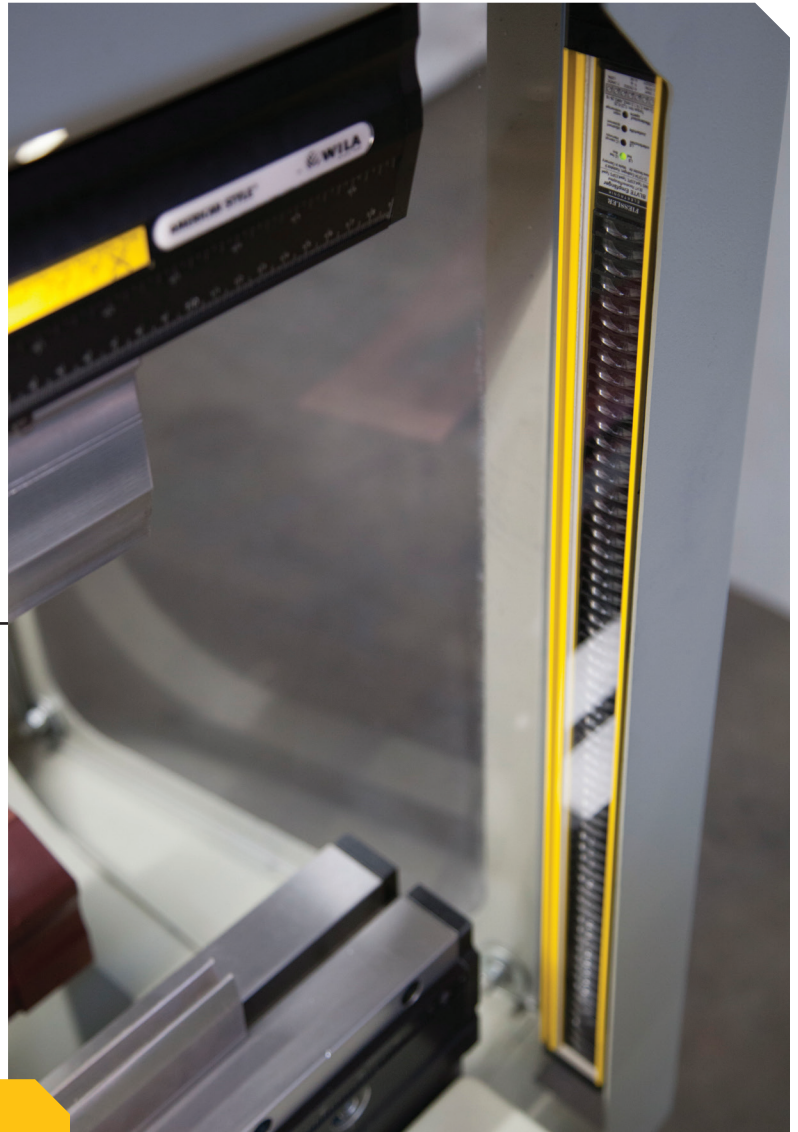
To provide convenience and storage for file management, a second screen can be added to the 60-ton model. A secondary screen also provides advantages for opening networks and reviewing part drawings in parallel with the primary screen.

### MOSES CONTROL (60 Ton Model)

The Moses Option is groundbreaking technology that provides the machine operator the ability to edit and run programs in a full 3D visual environment. The Moses option for the 60-ton includes a dual screen set-up for part orientation and simulation.



# LIGHT CURTAIN Ram Motion Initiation



## RAM MOTION INITIATION

This feature is standard on all 60 ton models and can be added as an option for the 120 -190 ton models.

The Accurpress Hybrid has a feature that allows for ram motion to be initiated by interrupting the light curtain beam. This is a great feature that speeds up part forming production while also reducing operator fatigue by allowing the operator to move the ram without using the foot pedal.

## MODEL Selections

Accurpress offers a full line of Hybrid models up to and including 285-ton capacities to provide cost-saving press brake bending solutions.

120 – Ton Models



190 – Ton Models



285 – Ton Models



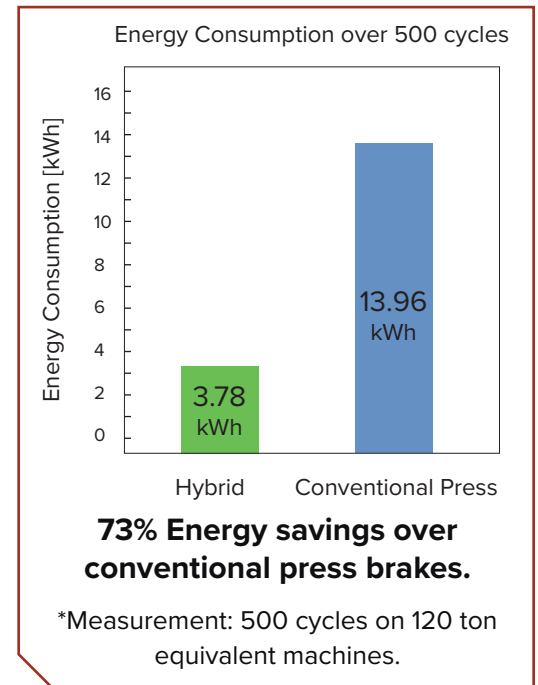


## ACCELL HYBRID Technology

### Choose an Accurpress Hybrid Machine

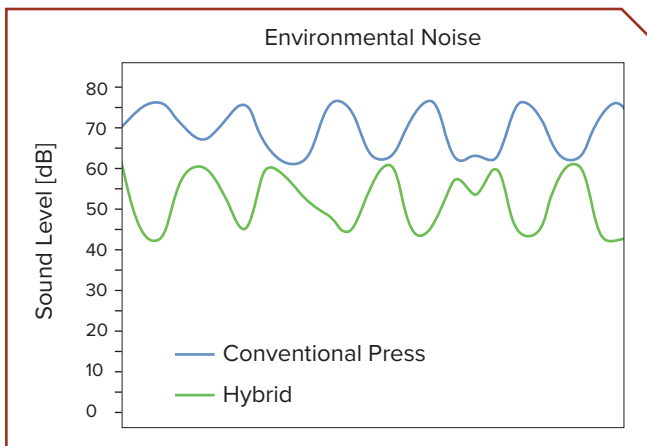
#### 1 High Energy Efficiency

The Accurpress Hybrid machines use a combination of hydraulic and Servo Drive systems to control ram motion resulting in dramatically reduced energy costs. There is no hydraulic pump, meaning no energy consumption when the machine is at idle and the counterbalanced return stroke requires almost no energy to raise the ram. Using a combination of Electric and Hydraulic Drive Systems, these hybrid machines are highly efficient, impressively quiet and utilize the latest in Accurpress Motion Technologies.



#### 2 Low Noise

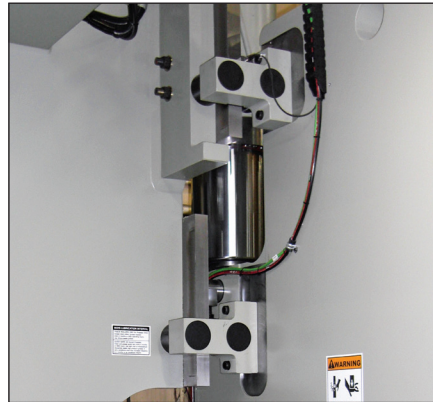
The Hybrid is the quietest Accurpress machine available. With no hydraulic pump, shop noise is reduced significantly.



Prospective owners should note that the average noise reduction over standard hydraulics is about 15 to 20 dB. Noise levels double with every 10 dB of increase. These machines operate with a 1/4 to 1/2 of the noise.

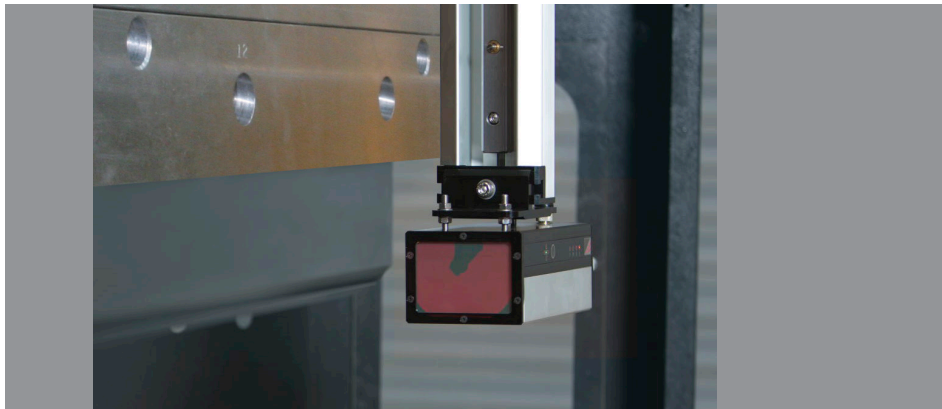
### 3 Max Productivity and Flexibility

Accell Hybrid machines are fast and offer generous ram stroke lengths. Most notably, the 5285xx model comes standard with a 14" stroke length...plus longer ram stroke lengths are available as an option. To further enhance high production forming, all Hybrid models include a 2-speed forming package of 24 and 44 inches per/minute. The 44 i.p.m is attainable when operating the press brake up to 50% of the maximum tonnage.



### 4 Safety Systems

All press braking operations must be operated under safe conditions at all times to protect the operator from pinch point hazards. Accurpress offers excellent solutions that will best satisfy the challenges of safe operations while maintaining high production.



## ACCELL HYBRID Outstanding Features

### 120 - 285 Ton Models

The **Accell Hybrid** combines power and precision into a sleek design with numerous features to provide the absolute ultimate in functionality, ease-of-operation and perfection in formed parts.

#### 4 POINT RAM GUIDE WAYS

The Four Point Ram Guiding System allows for stable ram movement even with larger open heights and stroke lengths. The ram moves freely up and down via 4 hardened Roller Ways.

#### 16" THROAT DEPTH

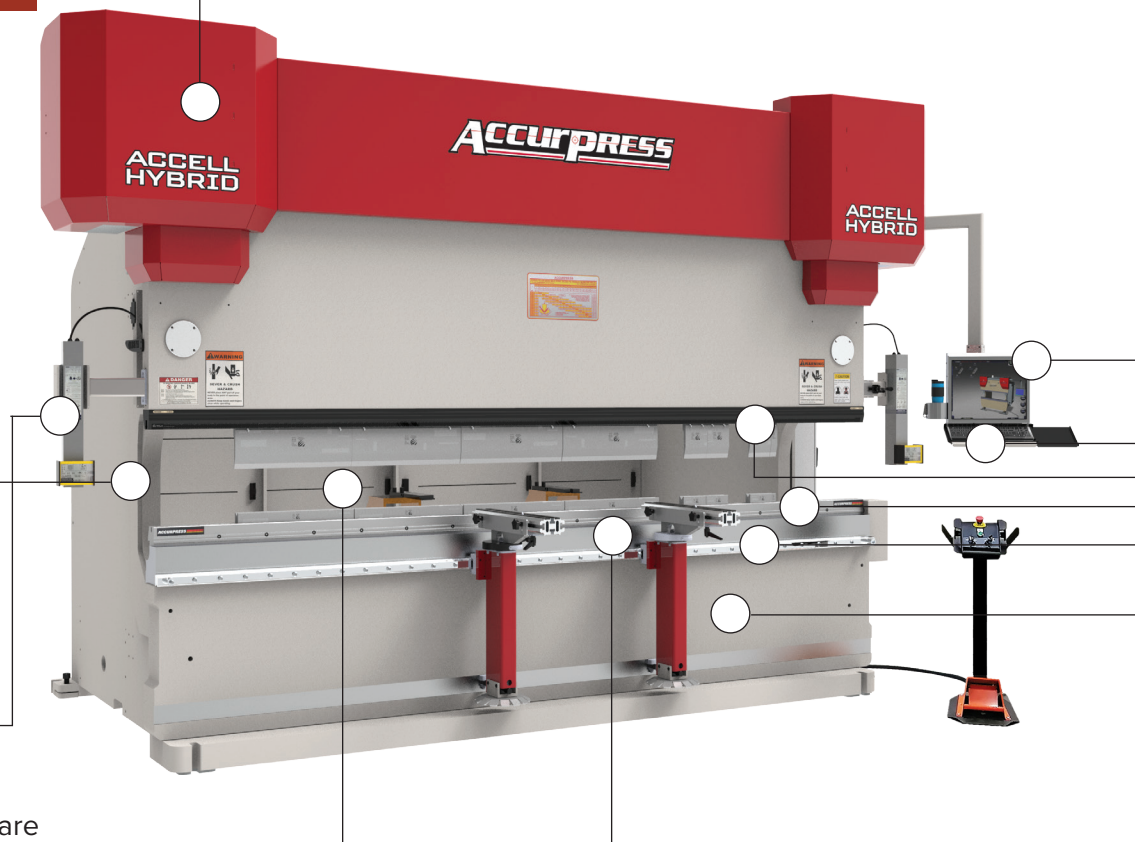
A large side depth increases flexibility with forming larger parts.

#### SAFETY LASER GUARDING

Optional Safety Laser Systems are provided to monitor any interference as parts are formed and will immediately stop the ram in the event of inadvertent obstruction.

#### REAR SAFETY DOOR

The backgauge area is completely protected with a rear gate and safety interlock switch.



### **VISION CONTROL**

The powerful and easy to use Vision Control comes standard with all Accell Hybrid models. Optional MOSES upgrade is available.

### **CONTROL HEAD WORK STATION**

The Vision control display has a convenient area for a keyboard and mouse. The 285 Ton model is equipped with 21.5" industrial quality wide screen monitor with an inductive touch screen.

### **HYDRAULIC RAM CLAMPING**

All Hybrid models come standard with an American hydraulic ram clamping system. An optional New Standard Ram Clamping System is also available.

### **CNC ACCURCROWN DIE HOLDER**

The Accurcrown system provides a uniform crown via precision wedges that compensate for machine deflection. This is fully integrated into Vision and the Material Compensation System.

### **OPTIONAL PRECISION SHEET SUPPORTS**

The bed of the machine is prepared for optional Precision Sheet Supports. This allows for easy installation of these support fixtures at any point.

### **MATERIAL COMPENSATION SYSTEM**

Material Thickness Sensing and Teach Crowning provide real time positioning adjustments based on material variance.

### **OFF CENTER FORMING**

The Hybrids advanced hydraulics allow for part forming (reduced tonnage) off the ends of the machine, removing "center only" forming restrictions.

## VISION Control

The Vision Control is a ground-breaking and revolutionary press brake control software system. Vision streamlines and simplifies the bending process, giving you full control over every aspect of metal forming.

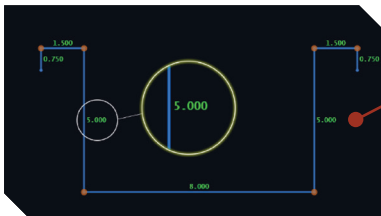


### FEATURES

- Touch screen control
- Automatic bend sequencing
- Automatic tool selection
- Quick tooling change
- Complete control over all axis
- Simple bump bending
- Special bend support such as offset, hemming and pre-bends
- Easily program custom tools



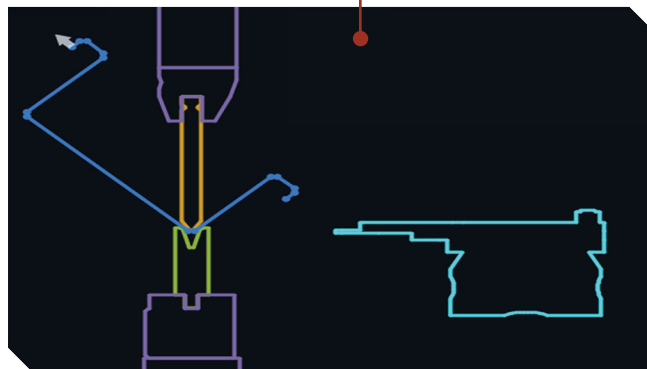
Sketch part profile using touchscreen



Easily add dimensions and angles

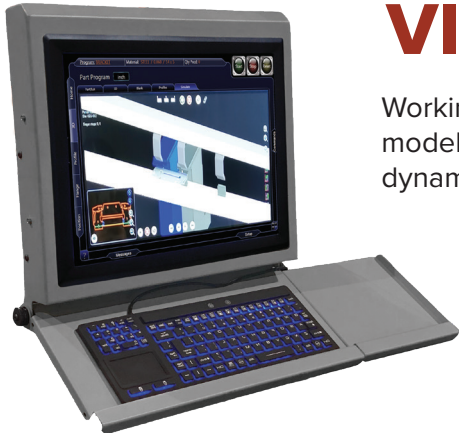


Confirm bend sequence and tooling



Begin forming





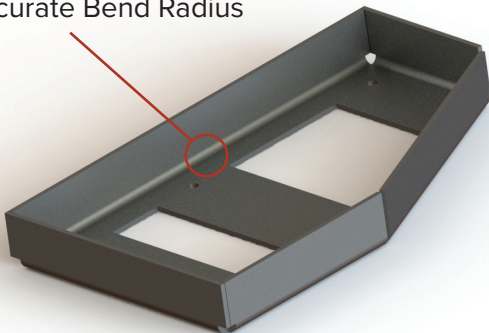
# VISION 3D

Working with Solidworks or Inventor, Vision 3D lets you import part models into Vision for full 3D programming, bend visualization and dynamic viewing during the forming process.

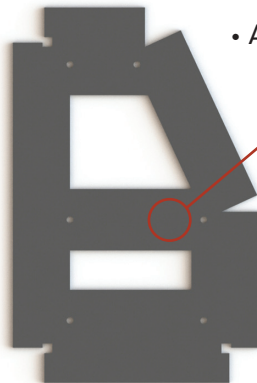
## Use **VISION** in your part models

### FEATURES

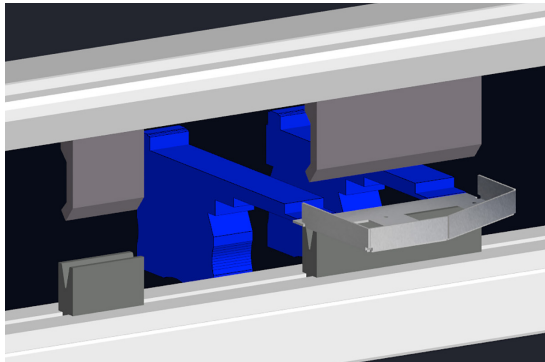
• Accurate Bend Radius



• Accurate Flat Patterns



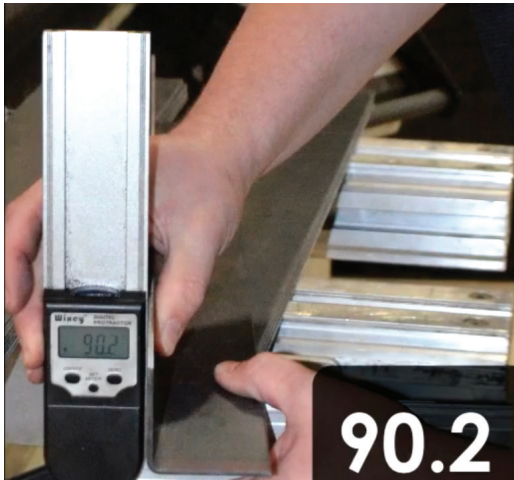
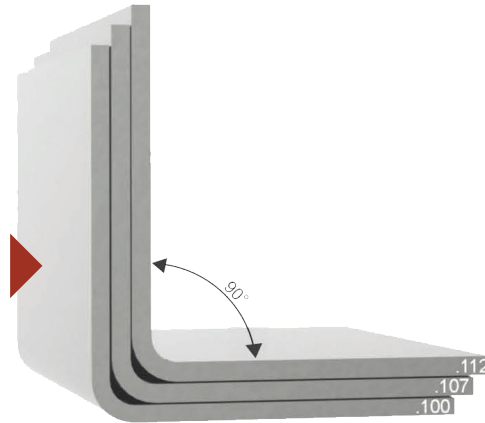
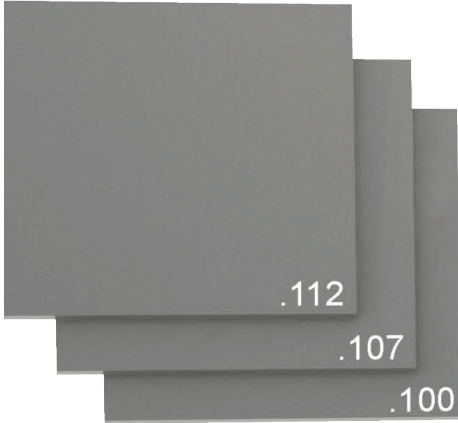
• Dynamic 3D Bend Simulation



• Run 3D programs on the ETS3000



## Material Thickness Sensing System



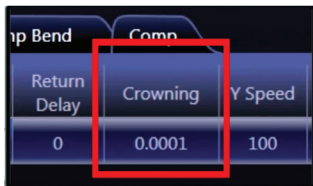
During the bending process, the Accell measures variations and inconsistencies in material thickness and then self-adjusts to maintain accurate angle performance.

The Material Thickness Sensing system also has a built-in safety feature when material thickness is detected outside of an acceptable range. In this case, when significant differences in material are detected, the ram will stop downward motion and return stately to the top of the stroke.

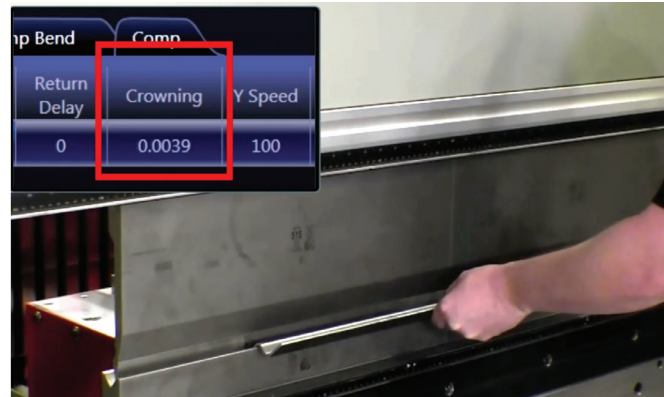
## Teach Crowning

The Teach Crowning feature eliminates the need to manually adjust crowning values. A crowning sensor measures machine deflection in real-time and automatically updates the Vision Program.

Theoretical Crowning value BEFORE forming.



Real Time Crowning Adjustment AFTER forming.



When additional Crowning is needed, simply depress the foot pedal a second time to form the part using the corrected crowning value.

## AiM - Angle Measurement System



To provide the absolute optimum in high precision bending, Accurpress offers AiM - an Angle Measurement System as an optional accessory for the Accell-E, U, and H models. AiM is recommended for demanding applications where minute differences in material thickness, grain direction, or spring-back leave formed parts outside of accepted tolerances. This measurement device operates via sensors that may be positioned anywhere along the length of the tooling to detect material and spring-back differences and makes instant adjustments resulting in highly precise formed pieces.

## KeMes A20x



A laser protractor accurate to within  $0.2^\circ$ , the KeMes A20x system can be handled as an off machine protractor to quickly and accurately measure resulting bends or while attached to a set of punches on

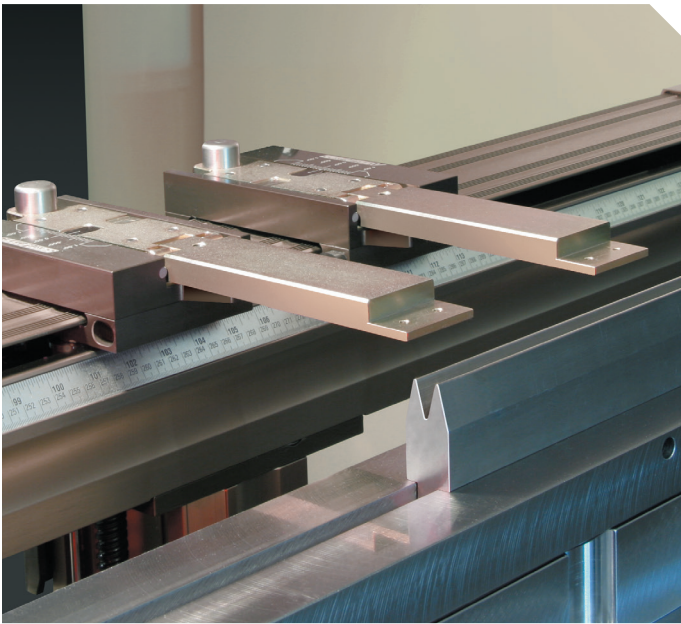
the machine. The protractor can measure the resulting bend without removing the part from the machine. The resulting measurement is interactively sent to the Vision Control via bluetooth signal to implement angle corrections for the current piece or to update the system for the next bend.



## BACKGAUGE Options

### PREMIUM BACKGAUGE

The Premium backgauge is Accurpress' standard backgauge, available for all makes and models of Accurpress press brakes. Available in lengths from 6' to 24', the Premium backgauge is built with large section extrusions and roller carriage castings that maintain strength and accuracy over the life of the machine. This gauge is easily serviced and maintained and comes standard with X, R, Z1/Z2 powered axes.



### PREMIUM SPECIFICATIONS

	X-Axis	R-Axis	Z1/Z2-Axes
<b>Axis Travel</b>	24" - 39" 609.6 - 990.6 mm	10" 254 mm	Distance between side frames minus 16"
<b>Positioning Speed</b>	900 ipm	900 ipm	900 ipm
<b>Position Repeatability</b>	+/- 0.001"	+/- 0.001"	+/- 0.003"
<b>Holding Force</b>	750 lbs		

### ELITE BACKGAUGE

The Elite backgauge offers full 6-axis part gauging via 2 independent gauging platforms that are mounted on a linear rail on the back of the bed. This rugged and accurate design combined with flexible gauging options and competitive pricing make the Elite backgauge your first-choice in 6-axis gauging. Rear guarding complete with gate and safety interlock switch, is installed for every Elite backgauge to meet all applicable safety standards.



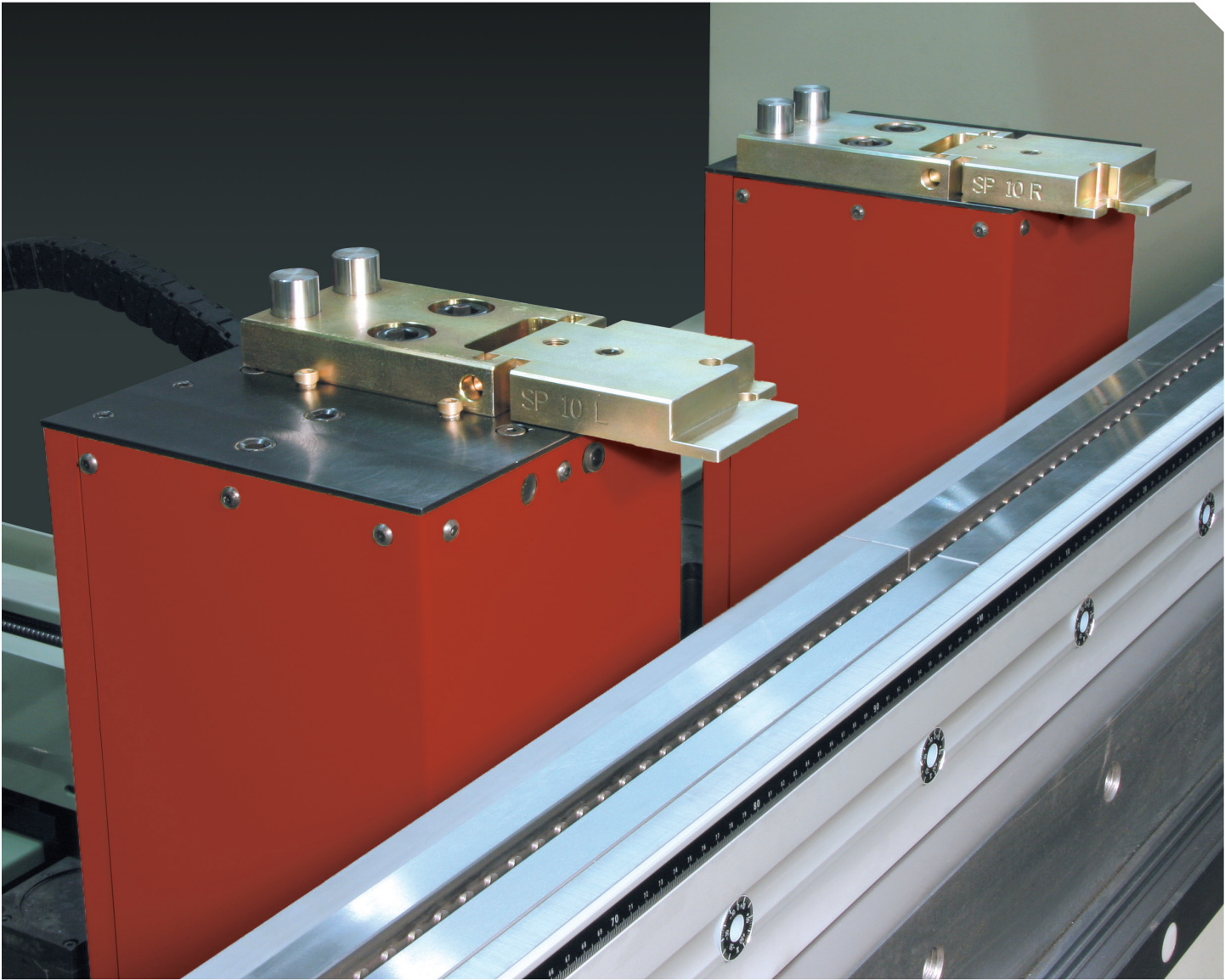
Finger tip contoured for tapered gauging applications

### ELITE SPECIFICATIONS

	X-Axis	R-Axis	Z1/Z2-Axes
<b>Axis Travel</b>	39" 990.6 mm	13" 330.2 mm	Distance between side frames minus 24"
<b>Positioning Speed</b>	900 ipm	900 ipm	900 ipm
<b>Position Repeatability</b>	+/- 0.001"	+/- 0.001"	+/- 0.003"
<b>Holding Force</b>	1500 lbs		



**SUPREME BACKGAUGE**



The Supreme backgauge is Accurpress' 6-axis gauging system that meets the challenges of complex sheet metal parts and fast paced production environments. Constructed from a one-piece rugged steel platform that is isolated from machine ram movements, the Supreme backgauge maintains its accuracy and strength over the lifetime of the machine. Rear guarding, complete with gate and safety interlock switch, is installed for every Supreme backgauge to meet all applicable industry safety standards.

**SUPREME SPECIFICATIONS**

	X1/X2-Axes	R1/R2-Axes	Z1/Z2-Axes
<b>Axis Travel</b>	39" 990.6 mm	10" 254 mm	Distance between side frames minus 24"
<b>Positioning Speed</b>	1,500 ipm	1,500 ipm	1,500 ipm
<b>Position Repeatability</b>	+/- 0.005"	+/- 0.001"	+/- 0.002"
<b>Holding Force</b>	2,000 lbs		



## ACCELL HYBRID MOSES Control

This groundbreaking control gives you the powerful features of Vision directly onto the Accurpress Ram. Use the Ram like a touchscreen while Moses easily walks you through the bend process.

- Displays 3D visual of the program during forming
- Use the Ram as a touch screen
- Stunning visual clarity and detail
- A visual guide for tool set ups and part orientation
- Adjust angles and flanges quickly and easily

Machine pictured with OPTIONAL side covers and enclosure.



## PRECISION TOOLING Features and Options

Accell Hybrid machines include CNC Accurcrowns as a standard feature. Optional holders are available offering hydraulic clamping as opposed to locking tooling in place via set screws.

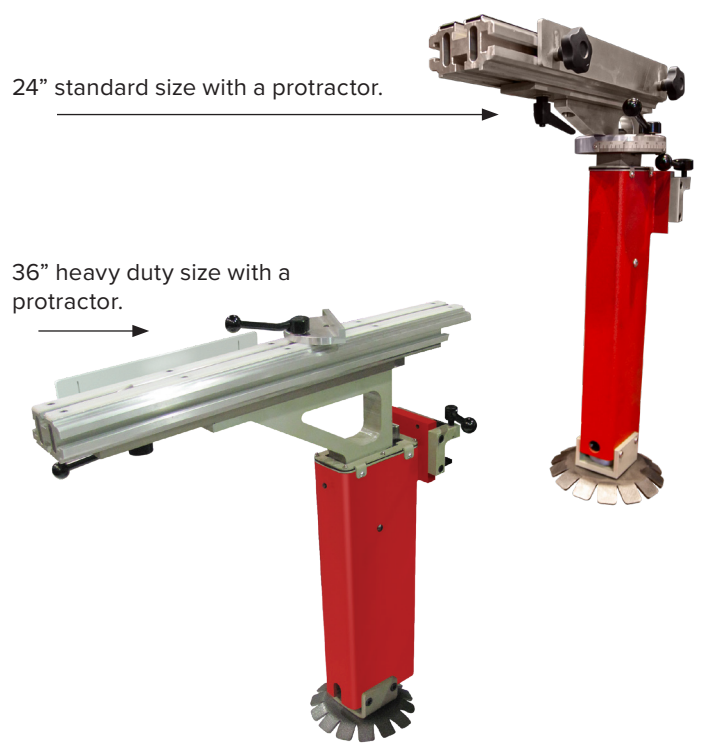


In addition to Crowning Systems, the Accell Hybrid includes hydraulic Ram Clamping equipped to handle either American tang-style or optional New Standard tang-style punches. To compliment the Crowning and Clamping Systems, a wide selection of precision ground tooling is available to satisfy complex and sophisticated jobs.

# ADDITIONAL Options

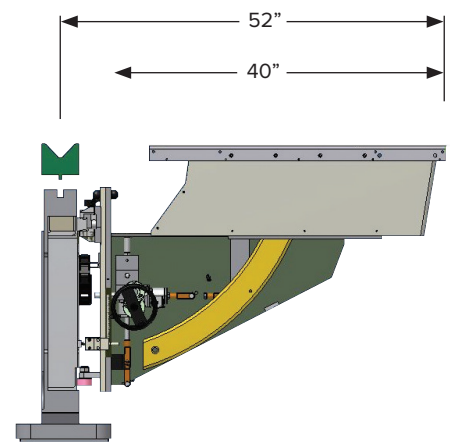
## PRECISION FRONT SUPPORT ARMS

The Accurpress front support arms come in 24" and 36" lengths and are fully adjustable for different tooling heights and thicknesses. The bottom Foot Disk allows the operator to easily adjust the height of the support arm while the top support piece can be adjusted front to back depending on the desired position. These support arms are mounted on a linear rail for the smooth and accurate posing left to right on the press brake. Both sizes feature angle gauging, squaring bars and disappearing stops.

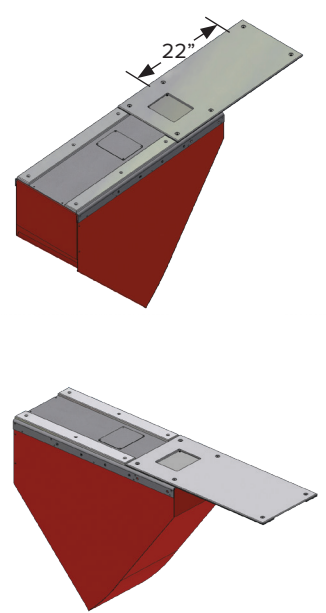


## SHEET FOLLOWER

The Accurpress Sheet Following System is a moveable support table that lifts and supports material during the bending motion. It is fully synchronized with the ram bend speed and desired angle and can support a load capacity of 500lb per sheet follower. Descent speed and activation of the Sheet Following System are fully programmable by the operator. The Sheet extender is an additional option.



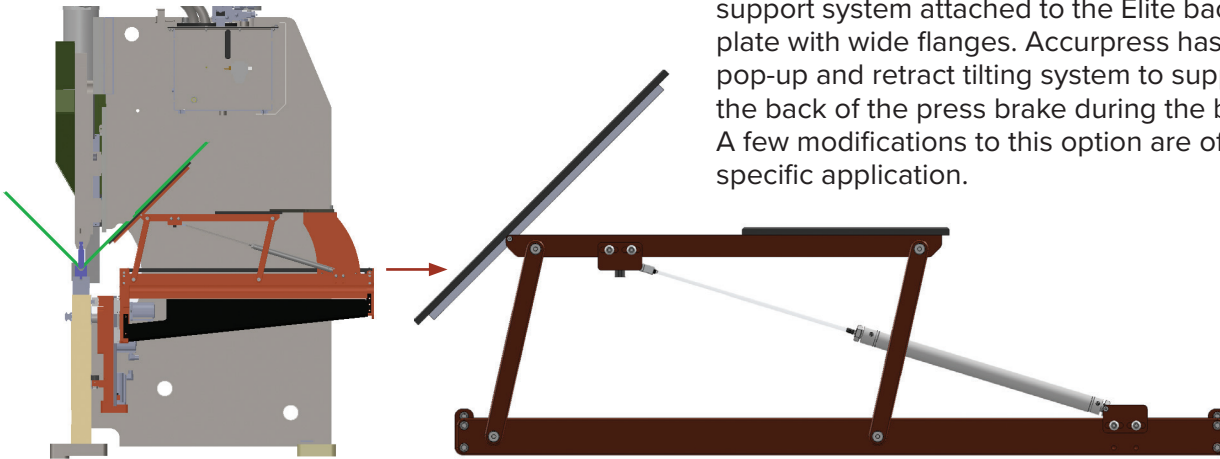
## SHEET EXTENDER



## Optional for **ELITE** Backgauge

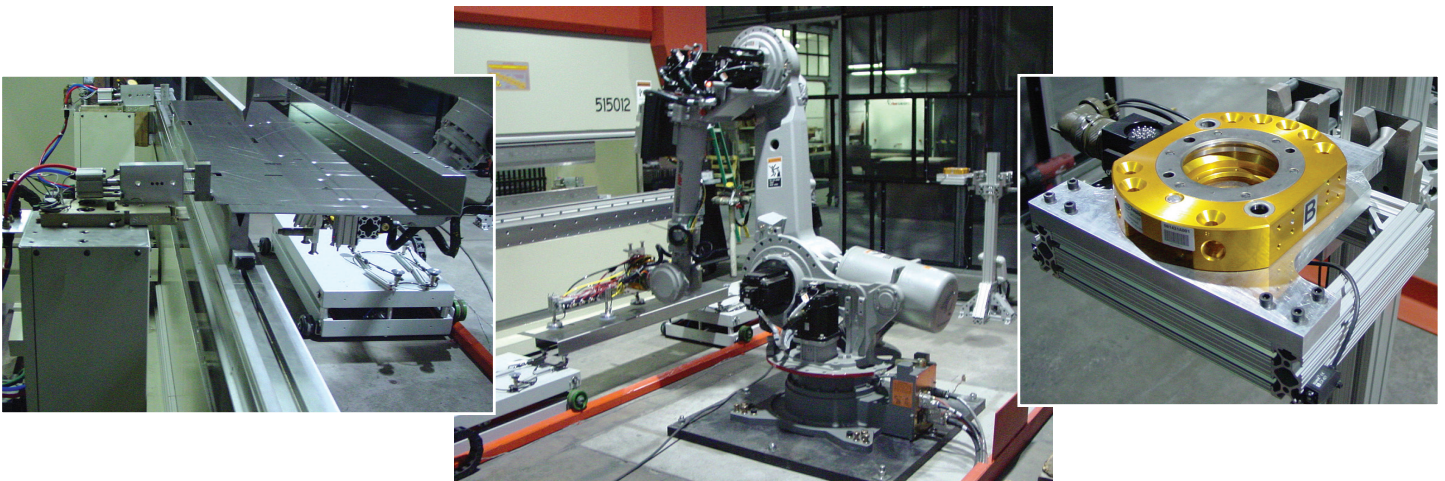
### **POP-UP & RETRACT TILTING** Sheet Support

Some forming applications may necessitate a sheet support system attached to the Elite backgauge to support plate with wide flanges. Accurpress has engineered a pop-up and retract tilting system to support the plate at the back of the press brake during the bending cycle. A few modifications to this option are offered to suit the specific application.



## ROBOTIC APPLICATIONS

Accurpress offers robotic press brake solutions for automated bending. Robotized bending combines the Accell Hybrid press brake with experienced partners in robotics and offline software.



# ACCELL H Specifications

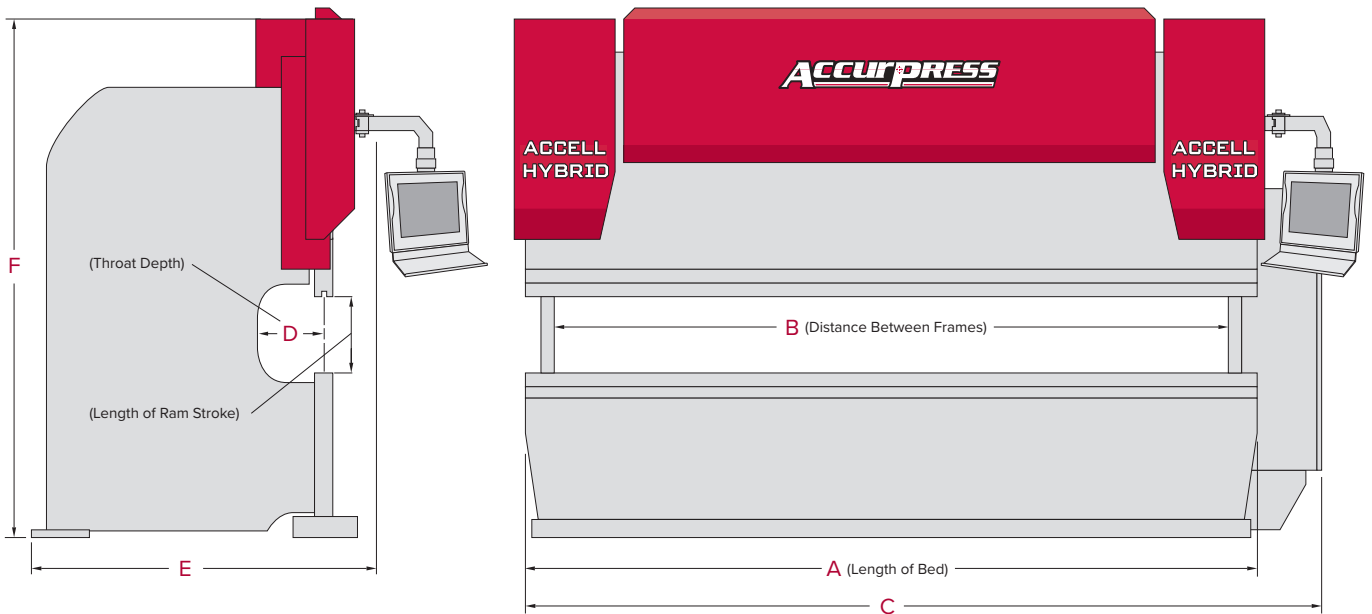
MODEL NUMBER	TONS	BED HEIGHT	TOP BED WIDTH	RAM OPEN HEIGHT	RAM CLOSED HEIGHT	STROKE LENGTH	OVERALL DIMENSIONS (INCHES)						APPROX. SPEEDS (IN/MIN)			APPROX. SHIPPING WEIGHT (LB)
							A	B	C	D	E	F	APPROACH	BEND	RETURN	
5604/H	60	32	4	19	8	11	48	44	49	16	64.5	112	540	24-44*	540	13,500
51206/H	120	34	4	19	8	11	72	54	81	16	76	112	540	24-44*	540	15,000
51208/H	120	34	4	19	8	11	96	78	105	16	76	112	540	24-44*	540	19,000
512010/H	120	34	4	19	8	11	120	102	129	16	76	112	540	24-44*	540	21,000
512012/H	120	34	4	19	8	11	144	126	153	16	76	112	540	24-44*	540	24,000
519010/H	190	34	4.75	19	8	11	120	101	129	16	79	116	540	24-44*	540	26,000
519012/H	190	34	4.75	19	8	11	144	125	153	16	79	116	540	24-44*	540	29,000
519014/H	190	34	4.75	19	8	11	168	149	177	16	79	116	540	24-44*	540	37,500
528510/H	285	36	5.5	22	8	14	120	102	131	16	95	129	440	24-44*	440	32,500
528512/H	285	36	5.5	22	8	14	144	126	155	16	95	129	440	24-44*	440	36,500
528514/H	285	36	5.5	22	8	14	168	150	179	16	95	129	440	24-44*	440	42,000
528516/H	285	36	12	22	8	14	192	174	203	16	95	129	440	24-44*	440	51,000

\*All models include 2-forming speeds. The 44 i.p.m. is attained at maximum of 50% of forming tonnage.

OVERALL DEPTH OF 51206/H TO 528516/H INCREASES IF THE OPTIONAL MOSES 3D VIRTUAL CONTROL IS PURCHASED.

5285XX/H SHIPPING WEIGHTS SHOWN EXCLUDE BACKGAUGE AND DIE HOLDER.

MACHINE SHIPPING WIDTHS AND WEIGHTS MAY CHANGE PENDING OPTIONAL ACCESSORIES. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



For more information about our products, please refer to our comprehensive brochures or visit our site [www.accurpress.com](http://www.accurpress.com).



## Dealer Support Network

Accurpress Sales & Service is provided by an Authorized Dealer Network. All of our Dealers are factory trained and supported to provide you with knowledgeable, competent, and local service.



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