

ALLSTEEL

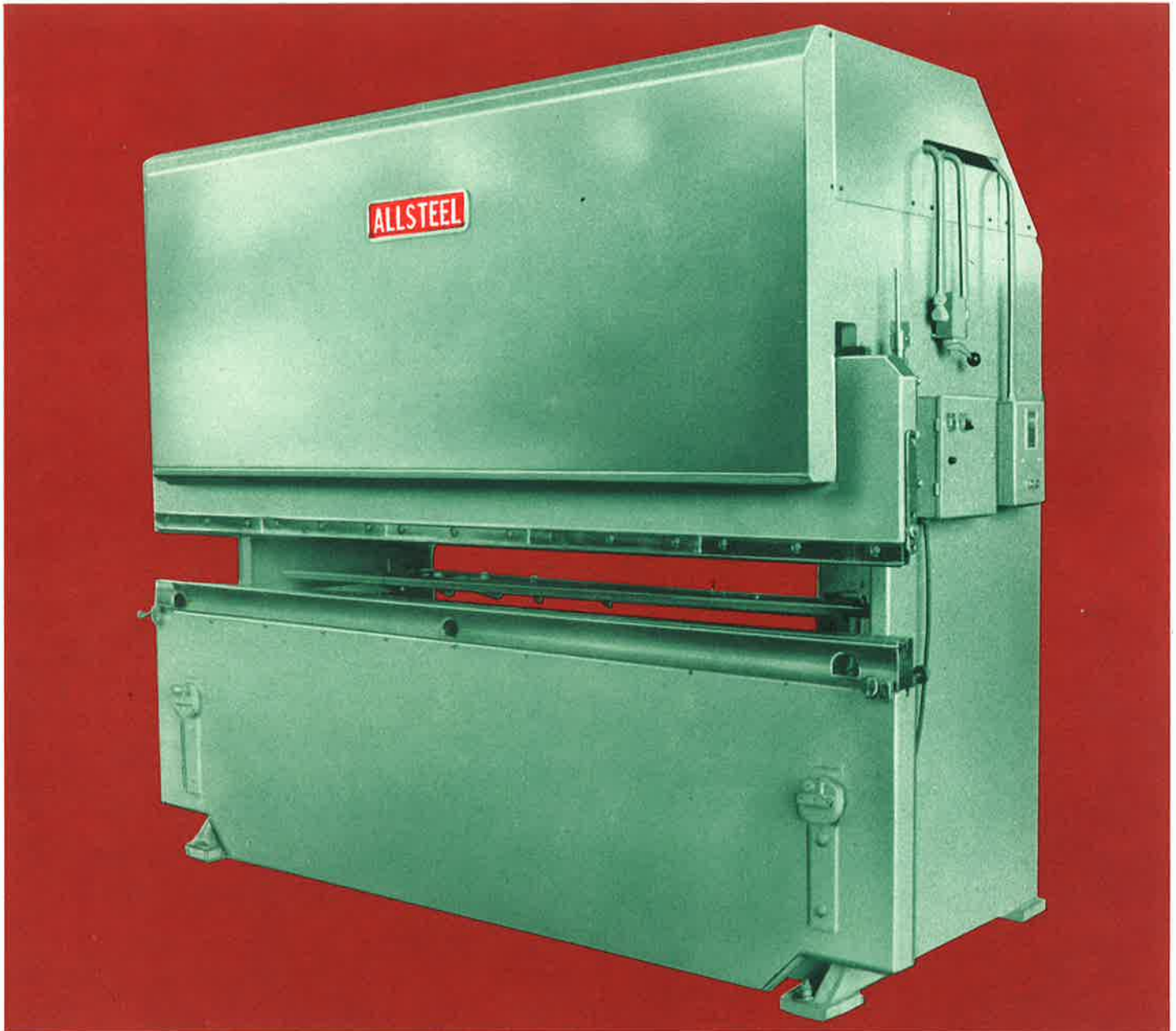
SERIES: "A" - 20 & 30 TON

SERIES: "B" - 45 to 120 TON

SERIES: "C" - 160 to 400 TON

SERIES: "D" - 500 to 2000 TON

HYDRO MECHANICAL PRESS BRAKES



A QUALITY CANADIAN PRODUCT OF

FERRO PRODUCTS

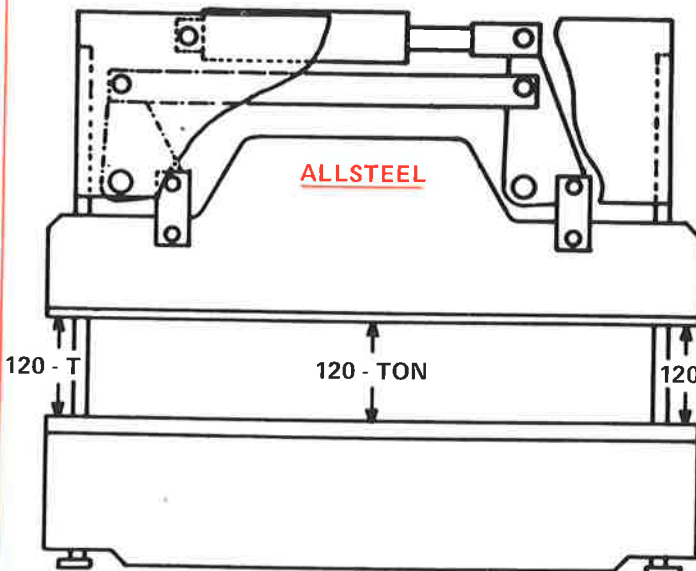
CANADIAN, BRITISH AND U.S.A. PATENTS

9405 PASCAL GAGNON STREET, MONTREAL 458, QUEBEC, CANADA - TEL.: (514) 321-4610

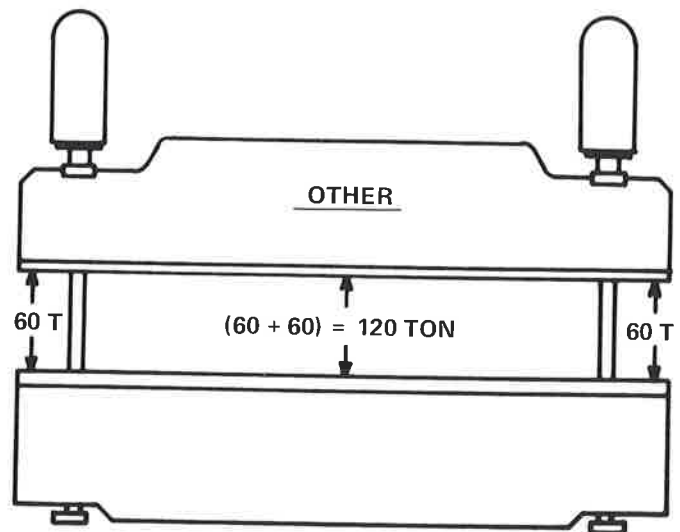
LIFE TIME PRECISION FORMING

The **ALLSTEEL** hydro-mechanical press brake combines the advantages of both mechanical and hydraulic brakes. **ALLSTEEL** features full tonnage over a long variable stroke with adjustable pressing speed and combines this with precise and parallel bottoming. The **ALLSTEEL** brake is of up-to-date construction and design with production proven reliability, with the following unique standard features:

- **ALLSTEEL** hydro-mechanical press brake is designed for heavy production with continued accuracy and operator convenience: the rigid, heavy section steel frame, ram and bed give minimum deflection under load.
- Robust mechanical linkage transmits power to the ram assuring perfectly precise parallel movement of ram, regardless of uneven loading: The construction adapts machine to the shock loads produced by punching, blanking, embossing and similar operations.
- Adjustable long stroke with micro-screw bottoming adjustment.
- Bed adjusts for tilt • Ram remains perfectly aligned with ram guides.
- Foot switch remote control or palm safety switches.
- Complete overload protection: no jamming or damage by bottoming.
- Push button ram return from any position of down stroke.
- Sectional spring open die clamps, hardened clamping bolts.
- Sturdy micrometer back gauges, simple and fast setting.
- Adjustable tonnage control.
- **ALSTEEL** simple, reliable hydraulic system provides power for the machine: this eliminates the complicated balancing systems needed on twin-cylinder machines and is guaranteed to give long, trouble free service.
- Hydraulic controls replace brake and clutch, allowing instant starts, stops and precise inching without operator fatigue.
- No compressed air required.



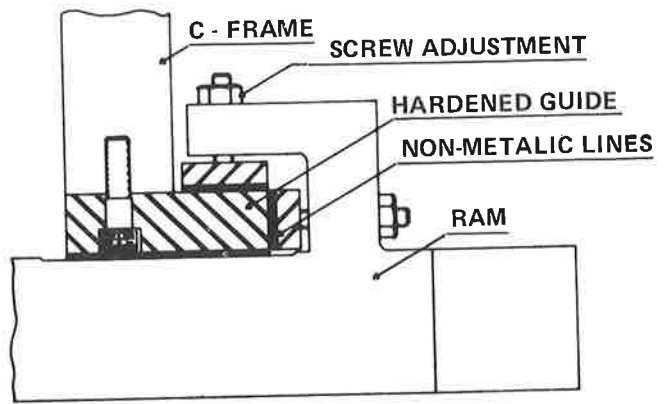
ALLSTEEL generates full tonnage at any point of stroke over entire length of ram: frame and links are designed accordingly to take this full load.



Conventional press - brakes only develop one half tonnage at either end of ram.



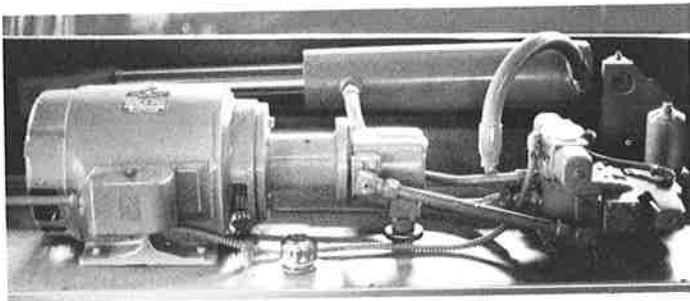
Interlocked design with welded heavy section steel frame and components for maximum strength and rigidity with continued life time accuracy.



Ram guides are lined with a non-metallic oil impregnated material which provides life time score proof sliding surfaces: hardened and ground ways.

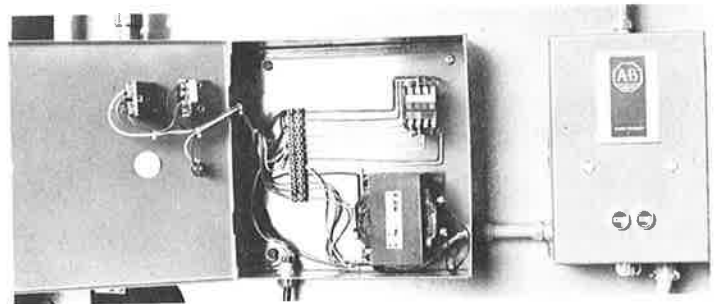
Screw adjustments in guides permit left to right and back to front adjustment (no shims) minimizing clearance for accurate ram travel.

Extra long ram guides: guiding is from the surface of the ram, minimizing distance from center line of ram, increases accuracy and life.

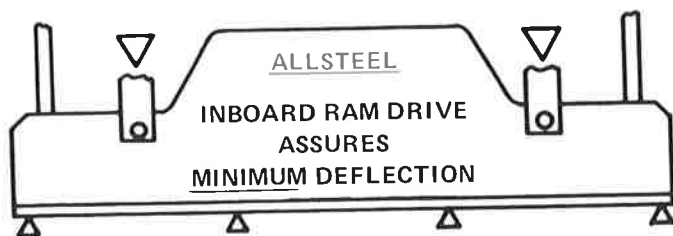


Simple, reliable hydraulic system

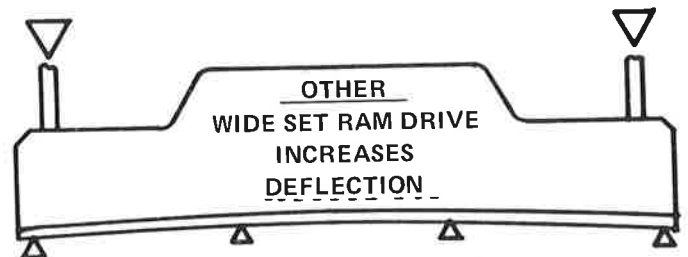
with large capacity oil tank. Single hydraulic cylinder provides power for the machine. This eliminates the complicated balancing systems needed on twin-cylinder machines. Bottoming and cycling accuracy is maintained to within one-thousandth of an inch by accurate micro switches. The Vickers hydraulic system is guaranteed to give long, trouble-free service. The relief valve incorporated in the system prevents overloading or jamming of the machine.



Simple electrics with standard components, C.S.A. approved.



ALLSTEEL application of ram drive links, mounted inboard of frame, reduces distance between points of load, thereby increasing ram stiffness, minimizing deflection, even under extreme on-or-off-center load conditions.



TYPICAL DESIGN USED BY OTHER MANUFACTURERS.

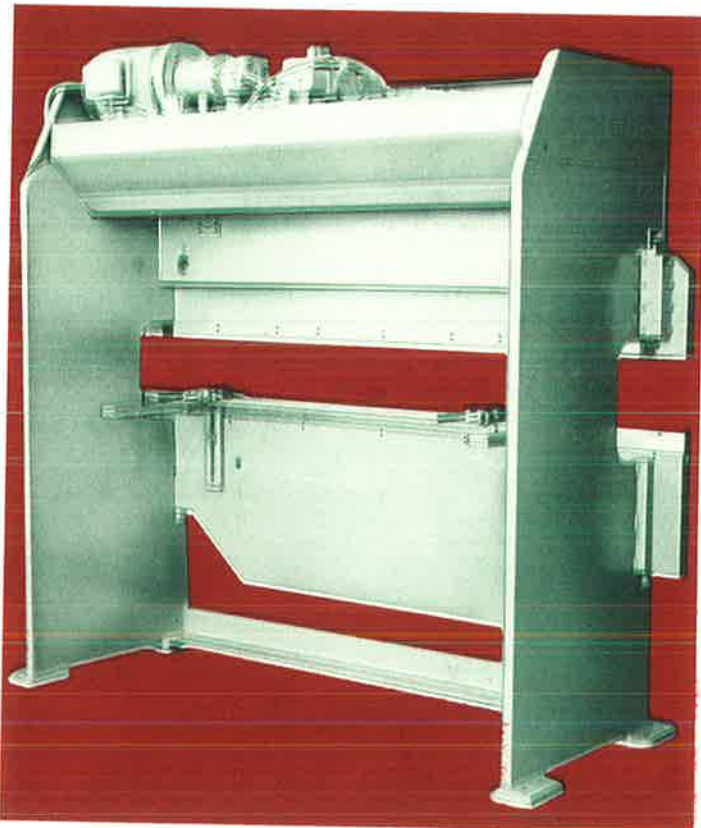
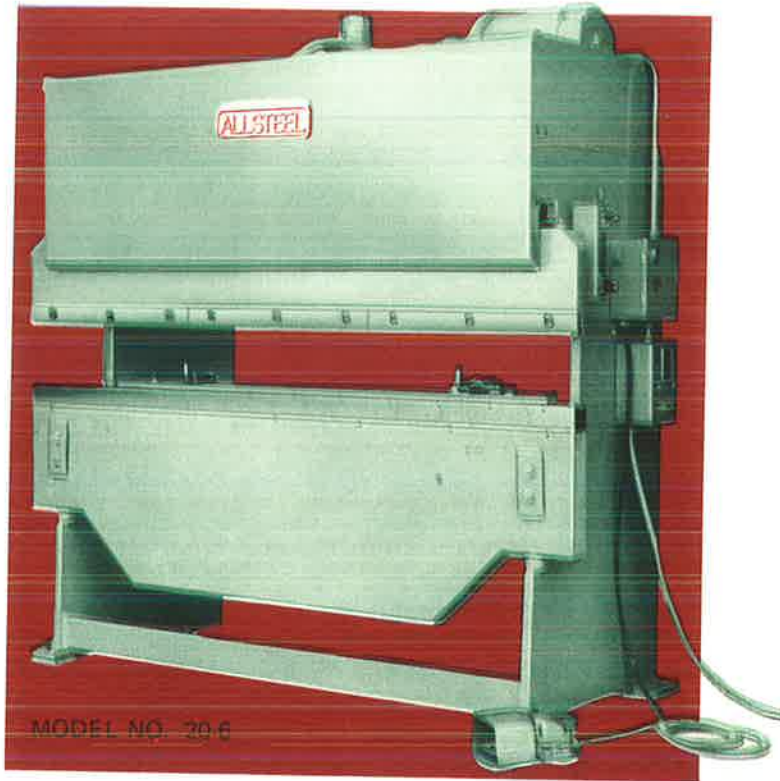


HYDRO MECHANICAL PRESS BRAKES

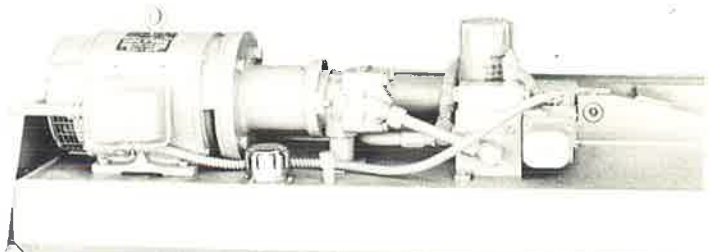
SERIES A. CAPACITIES: 20-30 TONS

Series "A" ALLSTEEL hydro mechanical press brakes have everything to meet your production requirements: ALLSTEEL combines the advantages of both mechanical and hydraulic brakes: the patented mechanical links with a single hydraulic cylinder maintain perfect parallel movement of ram, regardless of uneven loading; generates full tonnage at any point of stroke over entire length of ram: this design adapts the machine to the shock loads produced by punching, blanking, embossing and similar operations. Complete overload protection: no jamming or damage caused by bottoming.

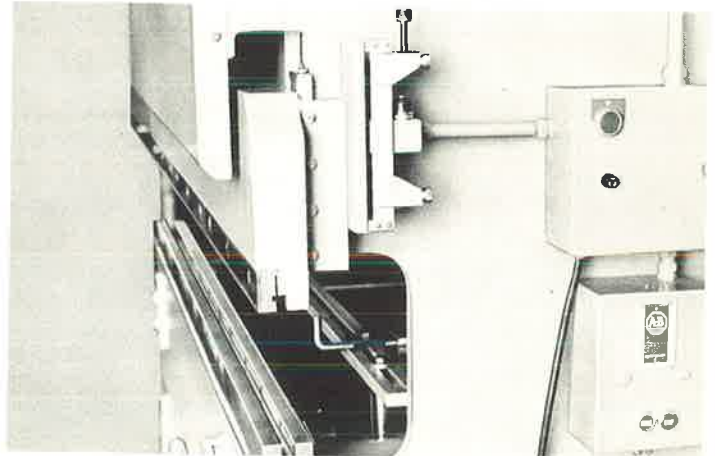
The "A" series machines with a very fast return speed and variable pressing speed are particularly suitable for small, fast "sit down" jobs.



REAR VIEW: NOTE CLEAN LINES! BACK COMPLETELY FREE OF ANY OBSTRUCTION.



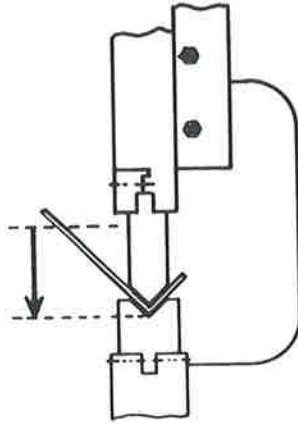
MODULAR POWER UNIT AND HYDRAULIC SYSTEM: CONVENIENT AND EASY TO SERVICE.



SIMPLE COMPREHENSIVE CONTROLS INSURE FAST, EASY OPERATION AND SET-UP.

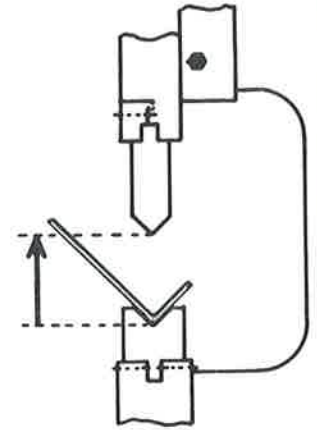
STANDARD EQUIPMENT SERIES: "A"
CAPACITIES: 20 TON; 30 TON;

INFINITELY VARIABLE PRESSING SPEED, RAPID FOR PRODUCTION JOBS, SLOW TO PREVENT WHIPPING OF LARGE PIECES.



FAST CONSTANT RETURN SPEED.

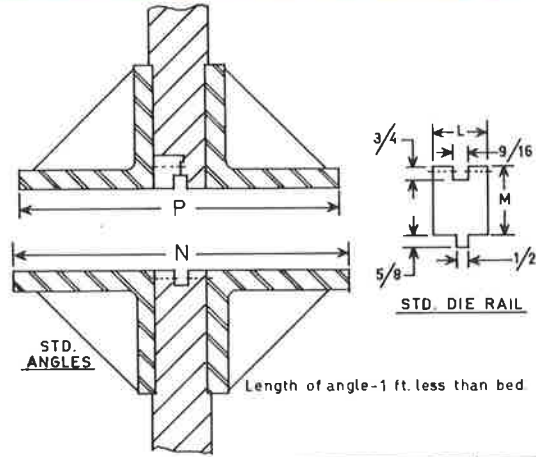
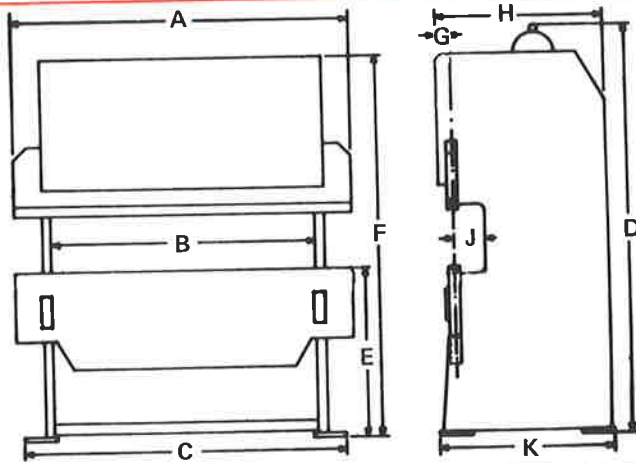
COMBINED WITH VARIABLE STROKE LENGTH.



- **ALLSTEEL** machines are furnished with complete electrics, motor, overload protected motor starter and foot switch remote control or palm button station.
- Die rails with groove, die retainer screws, sectional spring open die clamps, hardened clamping bolts and wrench.
- Standard micrometer back gauges.
- Limit switches with micro-screw bottoming adjustment control.
- Variable pressing speed.

Push button ram return from any position of down stroke.
Stroke length variable 0" to 4" full tonnage over entire length of bed and entire stroke.
Ram stops automatically at top of stroke if foot switch or palm safety buttons are released at any point of up stroke.
Bed can be easily and accurately tilted from the front of the machine allowing fade out work: tilting of bed in lieu of ram eliminates any side loads on ram guides. See page 12 & 13 for options & specials.

STANDARD DIMENSIONS SERIES "A"



MODEL NO.	CAPACITY		VAR. STROKE	OPEN HEIGHT	RAM SPEED PER SEC.	MOTOR HP	APPROX. OIL CAP. GALLONS	BASIC DIMENSIONS IN INCHES										APPROX. SHIPPING WEIGHT LBS.
	TONS	BENDS*						A	B	C	D	E	F	G	H	J	K	
20 - 4	20	20G x 8'	0	11 1/2	DOWN 1/2" TO 1 1/2" RETURN 2 3/4"	5	20	48	38	44	76	68	2 1/2	29	31	14	13 3/4	2,350
20 - 6		16G x 5'						72	62	68								3,250
20 - 8		11G x 2 1/2'						96	86	92								4,200
30 - 4	30	18G x 8'	4	11 1/2	DOWN 1/2" TO 1 1/2" RETURN 2 3/4"	7 1/2	20	48	38	45	79	71	3	31	33	14 1/2	14 1/4	3,050
30 - 6		14G x 6'						72	62	69								4,350
30 - 8		11G x 4'						96	86	93								5,400

* Bending capacity for 90° air bend on mild steel over V-die opening 8 times material thickness.
** Reference only: - Oil is not supplied with machine.

ALLSTEEL

HYDRO MECHANICAL PRESS BRAKES

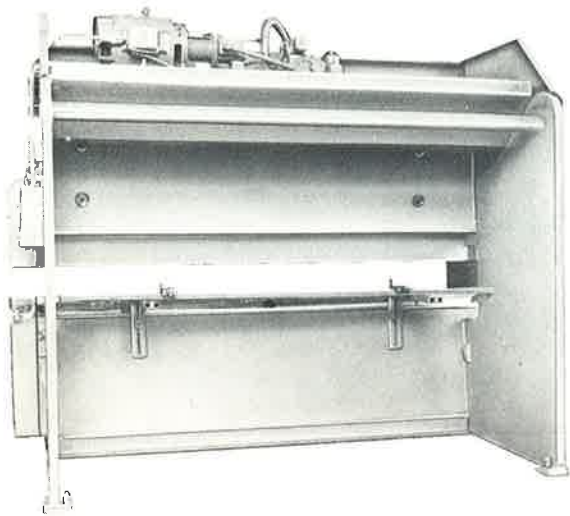
SERIES "B"
SERIES "C"

CAPACITIES: 45 – 120 TONS.
CAPACITIES: 160 – 400 TONS.

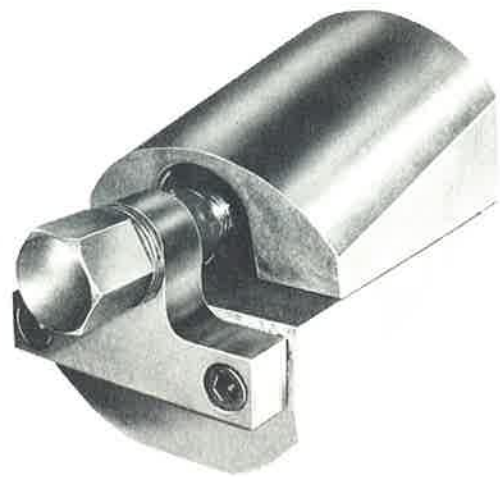
MODEL NO. 120-12
CAPACITY 120 TONS
TOTAL LENGTH 12 FT.



Series "B" and "C" ALLSTEEL hydro-mechanical press brakes are completely versatile: with a few inexpensive options they can be set up to do any job. Whether it is bending, punching, blanking, drawing, embossing or any other press work: ALLSTEEL adapts itself to high production or short run jobs equally as well due to minimum set-up time and fast cycling with variable stroke and pressing speed.



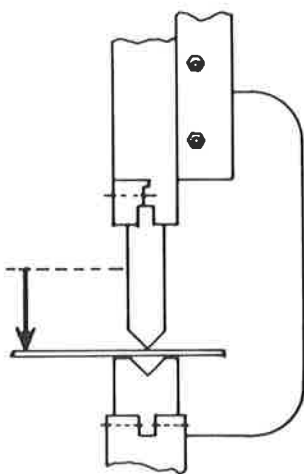
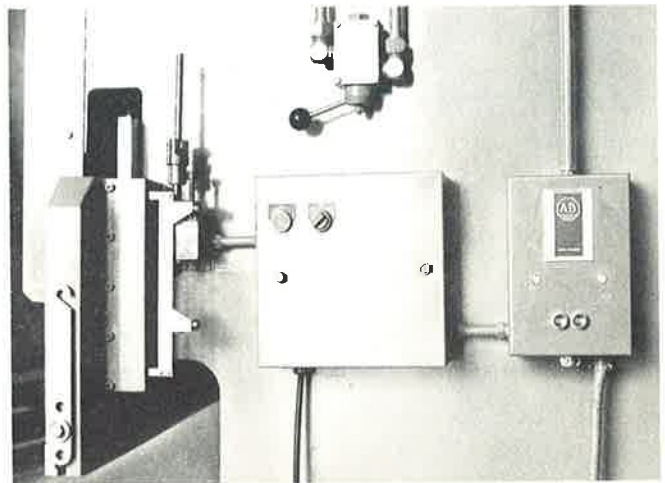
Rear view: free from any obstruction, easy access to back gauge, hydraulic system and power supply.



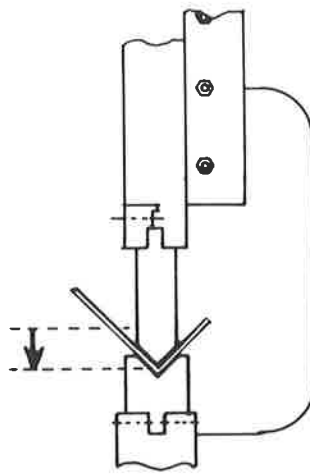
For fade out work etc. bed is tilted in lieu of ram: tilt adjustment is accomplished from front of machine: patented fine adjustment wedges allows 1/2" tilting: ram always remains perfectly aligned with ram guides: hardened wedge has no backlash, cannot jam or deform under load.

Simple comprehensive controls insure fast, easy operation.

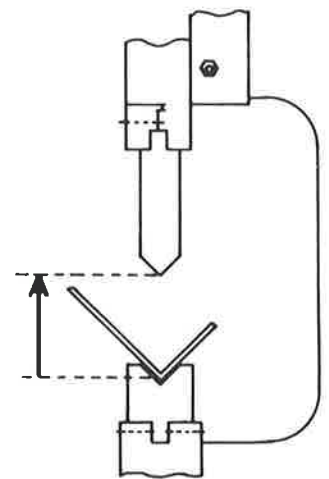
- 1) Finger tip control selects pressing speed, to suit job. Ram can be inched to and stopped at any point.
- 2) Ram need not complete a fixed cycle but may be raised by pressing "up" push button.
- 3) Three modes of control:
 - a) INCHING: simplifies setting of depth control for production runs or for bending to a mark or line.
 - b) STOP: ram stops at bottom of stroke to allow setting of dies.
 - c) AUTOMATIC: ram returns to and stops at top of stroke when pedal is released on up stroke.



FAST APPROACH WITH VARIABLE STROKE.



INFINITELY VARIABLE PRESSING SPEED.

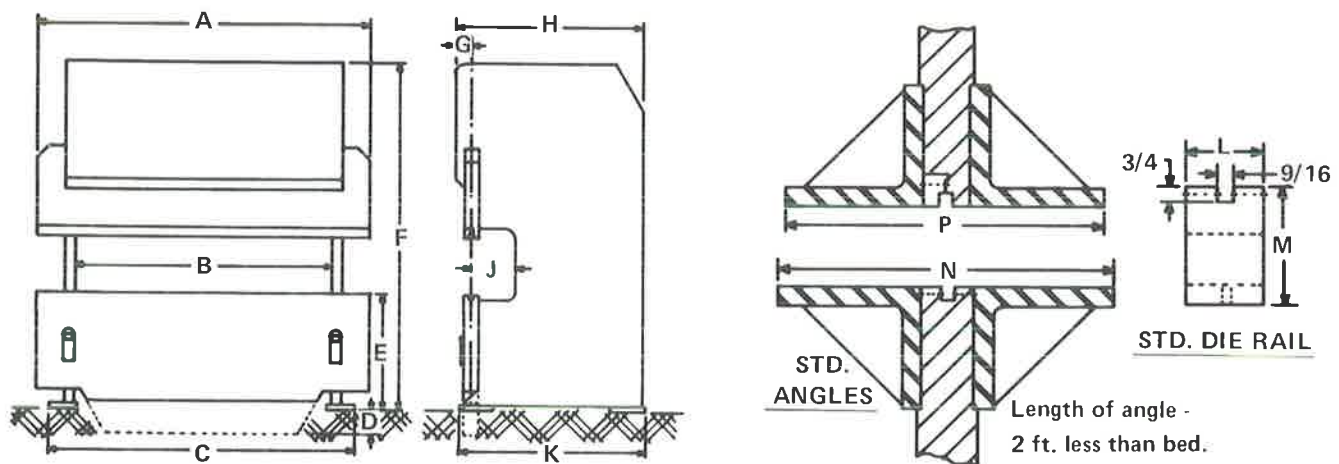


FAST CONSTANT RETURN SPEED.

STANDARD EQUIPMENT SERIES: "B" CAPACITIES: 45 TON; 70 TON; 120 TON;

- ALLSTEEL machines are furnished with complete electrics, motor, overload protected motor starter and foot switch remote control or palm button station.
 - Die rails with groove, die retainer screws, sectional spring open die clamps, hardened clamping bolts and wrench.
 - Standard micrometer back gauges.
 - Limit switches with micro-screw bottoming adjustment control.
 - Variable pressing speed.
 - Inch, stop, auto ram selector switch.
 - Complete overload protection: no jamming or damage caused by bottoming.
 - Push button ram return from any position of stroke.
 - Die rail centering clamp blocks.
 - Die hangers to facilitate turning of heavy multiple dies.
 - Extra long ram guides with adjustment screws for back to front and left to right adjustment, increases accuracy and machine life.
 - Hardened and ground ways.
 - Ram guides lined with a non-metallic oil impregnated material: providing long lasting score proof sliding surfaces.
- See pages 12 & 13 for options & specials.

STANDARD DIMENSIONS SERIES "B"



MODEL NO.	CAPACITY		VAR. STROKE	OPEN HEIGHT	RAM SPEED PER SEC.	MOTOR HP	APPROX. OIL* CAP. GALLONS	BASIC DIMENSIONS IN INCHES										APPROX. SHIPPING WEIGHT LBS.	
	TONS	BENDS*						A	B	C	D†	E	F	G	H	J	K		L
45 - 6	45	3/16 x 3'	0"	TO 15"	2"	10	20	72	54	58	32	90	7	46	43	2 3/8	18	7,500	
45 - 8		10G x 4'					18	9,300											
45 - 10		11G x 6'					18	12,000											
45 - 12		14G x 9'					18 1/2	17 3/4	13,700										
45 - 14							18 3/4		15,600										
45 - 16							18 3/4		17,400										
70 - 6	70	1/4 x 3'6"	6"	TO 15"	2"	15	20	72	54	59	95	7 3/4	50	8	47	2 3/4	18 3/4	18 1/4	11,800
70 - 8		3/16 x 5'					18 3/4	18 1/4	13,600										
70 - 10		10G x 7'					18 3/4	18 3/4	15,500										
70 - 12		11G x 9'					19 1/4	18 1/4	17,600										
70 - 14		14G x 12'					19 3/4	18 3/4	19,800										
70 - 16							20	19	21,900										
120 - 8	120	3/8 x 4'	0"	TO 17"	8"	20	30	96	78	84	34	108	10	53	50	2 3/4	18 3/4	18 3/4	18,500
120 - 10		5/16 x 5'					19 3/4	18 3/4	20,800										
120 - 12		1/4 x 7'					20 3/4		23,200										
120 - 14		3/16 x 8'					21 3/4	18 3/4	25,500										
120 - 16		10G x 12'					22 3/4		28,000										
120 - 18		11G x 14'					22 3/4		30,300										
120 - 20		23 3/4		32,700															

* Bending capacity for 90° air bend on mild steel over V-die opening 8 times material thickness.

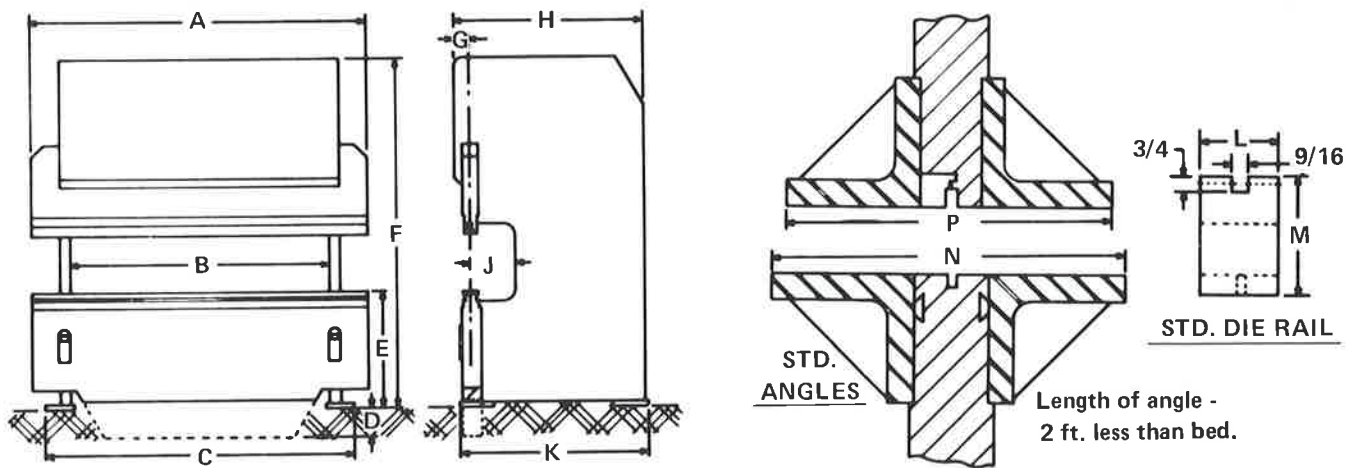
** Reference Only: — Oil is not supplied with machine.

† These dimensions can be changed according to requirements.

STANDARD EQUIPMENT SERIES: "C" CAPACITIES: 160 TON; 200 TON; 300 TON; 400 TON;

- ALLSTEEL machines are furnished with complete electric, motor, overload protected motor starter and foot switch remote control or palm button station.
 - Die rails with groove, die retainer screws, sectional spring open die clamps, hardened clamping bolts and wrench.
 - Standard micrometer back gauges.
 - Limit switches with micro-screw bottoming adjustment control.
 - Variable pressing speed.
 - Inch, stop, auto ram selector switch.
 - Complete overload protection: no jamming or damage caused by bottoming.
 - Push button ram return from any position of stroke.
 - Die rail centering clamp blocks.
 - Die hangers to facilitate turning of heavy multiple dies.
 - Extra long ram guides with adjustment screws for back to front and left to right adjustment, increases accuracy and machine life.
 - Hardened and ground ways.
 - Ram guides lined with a non-metallic oil impregnated material: providing long lasting score proof sliding surfaces.
 - Automatic central lubrication system.
 - Bed and ram machined to accept angles.
 - Dove tail slots machined on sides of bed.
- See pages 12 & 13 for options & specials.

STANDARD DIMENSIONS SERIES "C"



MODEL NO.	CAPACITY		VAR. STROKE	OPEN HEIGHT	RAM SPEED PER SEC.	MOTOR HP	APPROX. OIL** CAP. GALLONS	BASIC DIMENSIONS IN INCHES											APPROX. SHIPPING WEIGHT LBS.
	TONS	BENDS*						A	B	C	D†	E	F	G	H	J	K	L	
160 - 8	160	3/8 x 6'	0"	19"	2"	25	30	96	78	85	123	11	56	54	8	18 3/4	20 3/4	23,700	
160 - 10		3/16 x 7'						120	102	109							20 3/4	27,500	
160 - 12		1/4 x 9'						144	126	134							21 3/4	32,300	
160 - 14		3/16 x 12'						168	150	157							22 3/4	35,200	
160 - 16		10GA x 16'						192	174	181							19 3/4	39,300	
160 - 18								216	198	205							19 3/4	43,200	
160 - 20								240	222	229							19 3/4	47,000	
200 - 10	200	1/2 x 5'	10"	1.5"	30	40	120	102	110	123	12	60	58	8	19 3/4	22 1/4	28,500		
200 - 12		3/8 x 7'					144	126	134							23 3/4	32,800		
200 - 14		5/16 x 9'					168	150	158							20 3/4	38,000		
200 - 16		1/4 x 12'					192	174	182							20 3/4	43,200		
200 - 18		3/16 x 14'					216	198	206							22 1/4	48,200		
200 - 20							240	222	230							23 1/2	53,400		
300 - 10		300					3/4 x 4'	0"	21"							1.25"	40	120	102
300 - 12	5/8 x 6'		144	126	136	46,700													
300 - 14	1/2 x 8'		168	150	160	52,000													
300 - 16	3/8 x 10'		192	174	184	57,200													
300 - 18	5/16 x 14'		216	198	208	62,400													
300 - 20			240	222	232	67,500													
400 - 10	400		1 x 4'	12"	12"	40	120			102	114	138	15 1/2	78	72			10	20 3/4
400 - 12		3/4 x 7'	144				126	138	56,500										
400 - 14		5/8 x 8'	168				150	162	64,100										
400 - 16		1/2 x 10'	192				174	186	71,200										
400 - 18		3/8 x 14'	216				198	210	78,000										
400 - 20			240				222	234	85,200										

* Bending capacity for 90° air bend on mild steel over V-die opening 8 times material thick.

** Reference only: - Oil is not supplied with machine.

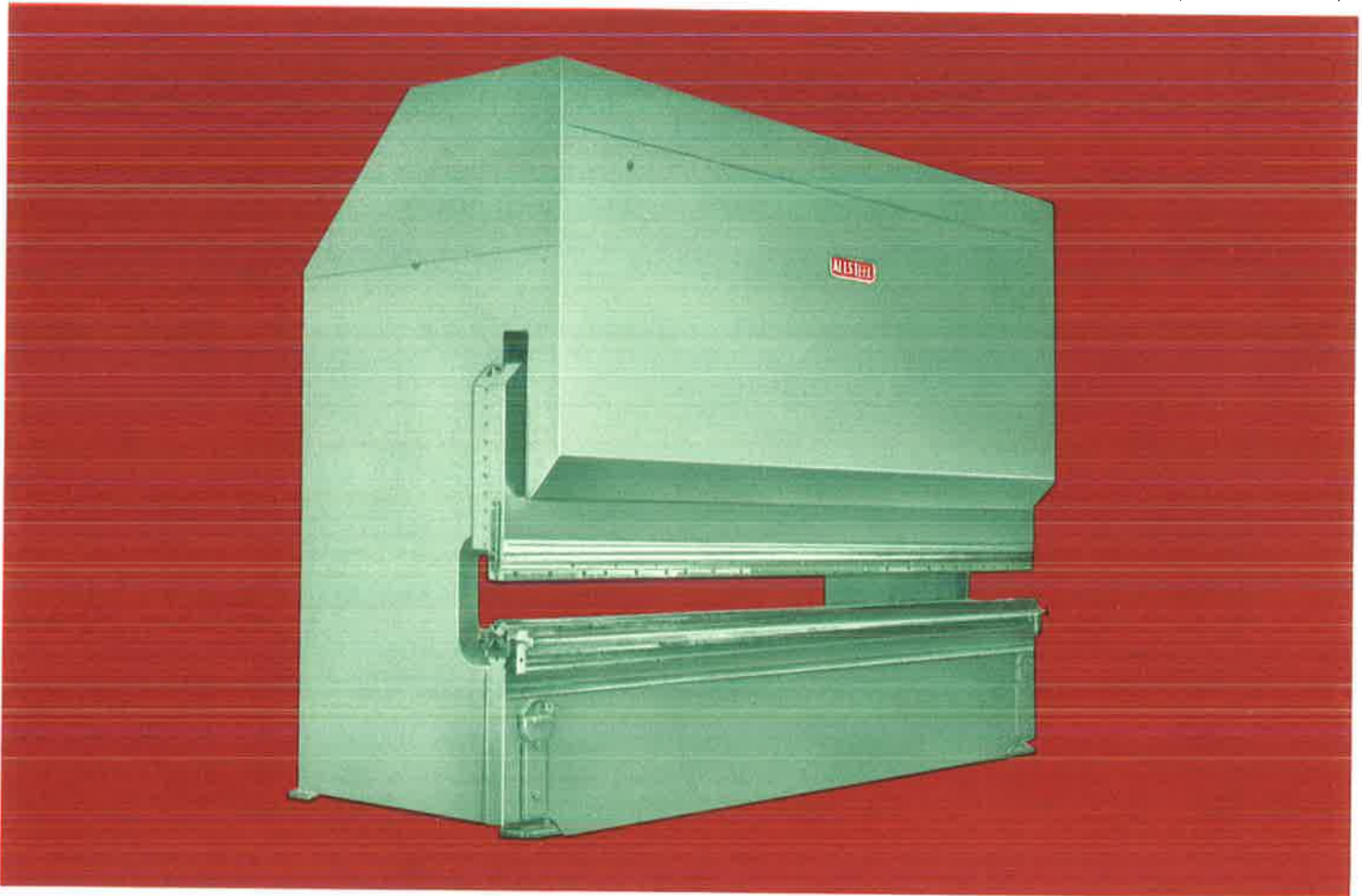
† These dimensions can be changed according to requirements.

ALLSTEEL

HYDRO MECHANICAL PRESS BRAKES

SERIES: "D"

CAPACITIES: 500; 600; 800; 1000; 1300; 1600; 2000 TON;

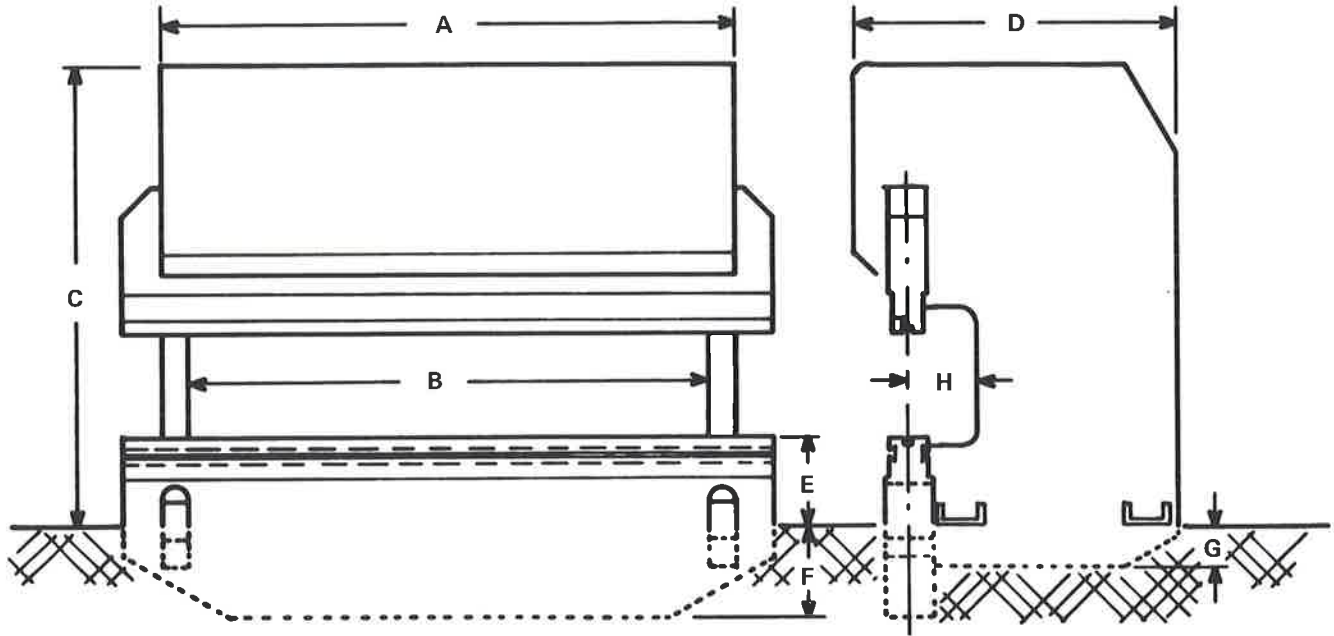


The series "D" machines are the heavy-duty models of the ALLSTEEL press brake line. These machines are equipped with high capacity hydraulic systems with oil coolers as required, in order to handle the heaviest continuous production jobs with ease. The front operated digital stroke adjustment and power bed tilt adjustment make set-up a fast finger tip job.

STANDARD EQUIPMENT

- Complete electrics, motors, overload protected motor starter.
- Die rails with groove, die retainer screws, sectional spring open die clamps, hardened clamping bolts and wrench.
- Heavy duty back stops with work support arms.
- Limit switches with micro-screw bottoming adjustment control.
- Adjustable tonnage control and indicator.
- Variable pressing speed.
- Inch, stop, auto ram selector switch.
- Front operated digital depth adjustment.
- Power operated control, with indicators for tilting of bed to perform fade out work etc.
- Push button ram return from any position of stroke.
- Foot switch remote control or palm safety buttons.
- Tonnage indicator and remote tonnage control.
- Automatic central lubrication system.
- Complete overload protection: no jamming or damage caused by bottoming.
- Extra Long ram guides with adjustment bolts for back to front and left to right adjustment, increases accuracy and machine life.
- Ram guides lined with a non-metallic oil impregnated material: providing long lasting score proof sliding surfaces.
- Hardened and ground ways.
- Bed and ram machined to accept angles.
- Dove tail slots machined on sides of bed.
- Die rail centering clamp blocks.
- Die hangers to facilitate turning of heavy multiple dies. See pages 12 & 13 for options & specials.

STANDARD DIMENSIONS SERIES "D"



MODEL NO.	CAPACITY		VAR. STROKE	OPEN HEIGHT	SPEED PER SEC.	H.P.	APPROX. OIL* GAL. GALLONS	BASIC DIMENSIONS IN INCHES						APPROX. SHIPPING WEIGHT (IN LBS.)																							
	TONS	BENDS*						A	B	C	D	E	F†		G†	H																					
500 - 10 500 - 12 500 - 14 500 - 16 500 - 18 500 - 20	500	3/4" x 8'	0"	21"	1.25"	50	40 50 60 69 79 88	120 144 168 192 216 240	102 126 150 174 198 222	138	82	34"	16 24 32 40 48 56	0	12"	68,000 75,000 83,000 93,000 103,000 112,000																					
600 - 12 600 - 14 600 - 16 600 - 18 600 - 20 600 - 22		3/4" x 12'															3/8" x 24'	144	90	48 56 64	8	82,000 91,000 101,000 113,000 126,000 134,000															
800 - 12 800 - 14 800 - 16 800 - 18 800 - 20 800 - 22		1" x 8'															1/2" x 22'						146	94	30 38 46 54 62 70	10	112,000 123,000 134,000 149,000 162,000 187,000										
1000 - 12 1000 - 14 1000 - 16 1000 - 18 1000 - 20 1000 - 22		2" x 7'															3/4" x 16'											152	100	30 38 46 54 62 70	12	137,000 150,000 163,000 179,000 193,000 208,000					
1300 - 12 1300 - 14 1300 - 16 1300 - 18 1300 - 20 1300 - 22		2" x 8'															3/4" x 18'																158	106	34 42 50 58 66 74	24	164,000 179,000 195,000 211,000 229,000 246,000
1600 - 12 1600 - 14 1600 - 16 1600 - 18 1600 - 20 1600 - 22		2" x 10'															3/4" x 20'																				
2000 - 12 2000 - 14 2000 - 16 2000 - 18 2000 - 20 2000 - 22 2000 - 24	2" x 14'	3/4" x 24'	166	120	42 50 58 66 74 88 90	45	265,000 287,000 317,000 354,000 349,000 439,000 479,000																														

* Bending capacity for 90° air bend on mild steel over V-die opening 8 times material thickness.

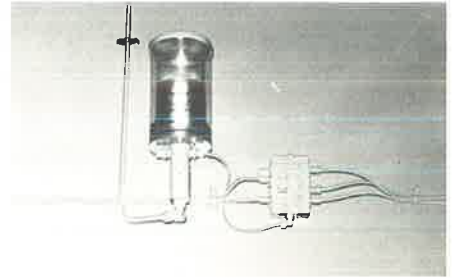
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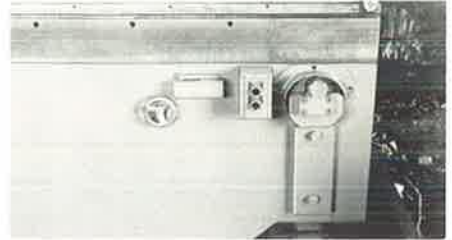
OPTIONAL EQUIPMENT

- Safety palm buttons and/or dual foot switches.
- Time delay interlock for dual palm buttons.
- Front operated push button emergency stop.
- Stroke counter.
- Extra high speed.
- Tonnage indicator and remote tonnage control.
- Variable tonnage adjustment control to return ram at specific tonnage.
- Front operated micrometer back gauge with digital counter.
- Push button controlled motorized drive for front operated back gauge.
- Vertical adjustment for front operated back gauge.
- Non-cycle control.
- Automatic full cycle control.
- "up" - "down" indicator lights.
- Front operated stroke control with digital counter.
- Finish to customers own color or specifications.
- Bed and ram machined front and back to accept mounting angles. (Std. for series "C" and series "D").
- Mounting angles — standard (as per catalog) or custom.
- Extra wide bed with tee-slots.
- Dove tail slots machined in bed or ram. (Std. for series "C" & "D").
- Extra deep throat.
- Extra large open height.
- Bed and ram extensions (horn) for longer bends or for forming tubular sections, available on one or both ends.
- Work support arms.
- Central automatic lubrication system. (Std. on series "C" and series "D").
- Turret depth stop to allow different bottoming depths in sequence.
- **ALLSTEEL** Dial-A-Bend, a unique inexpensive multi-die set-up with a six station bend selector is the most versatile and productive forming system available for light gauge work.
- Machines can be connected in tandem.
- Combination brake/shear available.

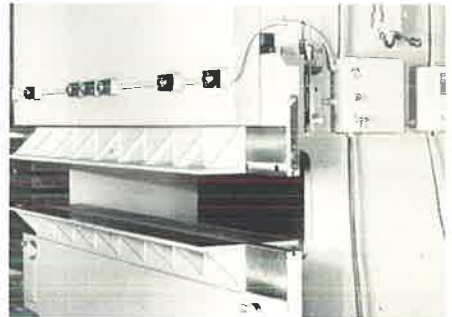
AUTOMATIC
CENTRAL
LUBRICATION
SYSTEM



BACK GAUGE
MOTORIZED
CONTROL WITH
DIGITAL
COUNTER.

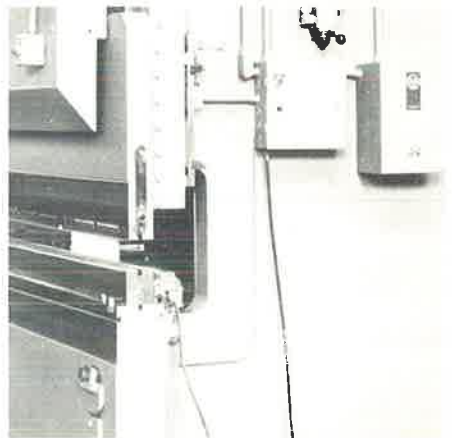


SAFETY PALM
BUTTONS WITH
BUILT IN
TIME DELAY
INTERLOCK



STANDARD
SET OF
STURDY
MOUNTING
ANGLES

FRONT
OPERATED,
PUSH BUTTON
EMERGENCY
STOP.



EXTRA DEEP
THROAT

LIGHT
INDICATOR
TO SHOW
DIRECTION
OF RAM
MOVEMENT



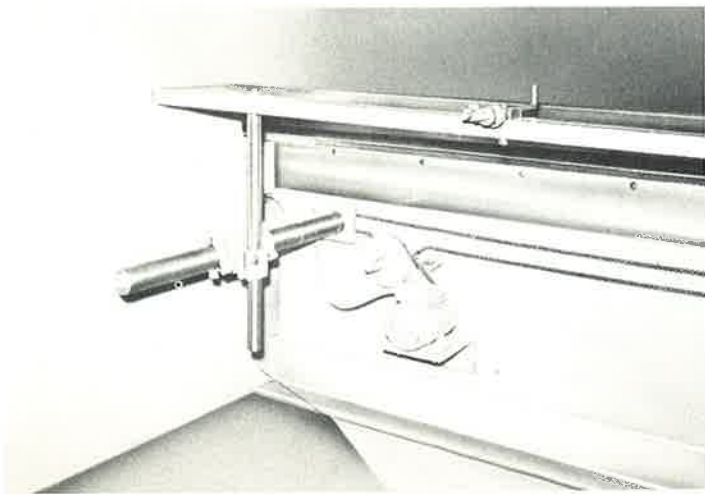
FRONT
OPERATED
STROKE
CONTROL WITH
DIGITAL
COUNTER
TONNAGE
INDICATOR
AND CONTROL.

SIMPLICITY

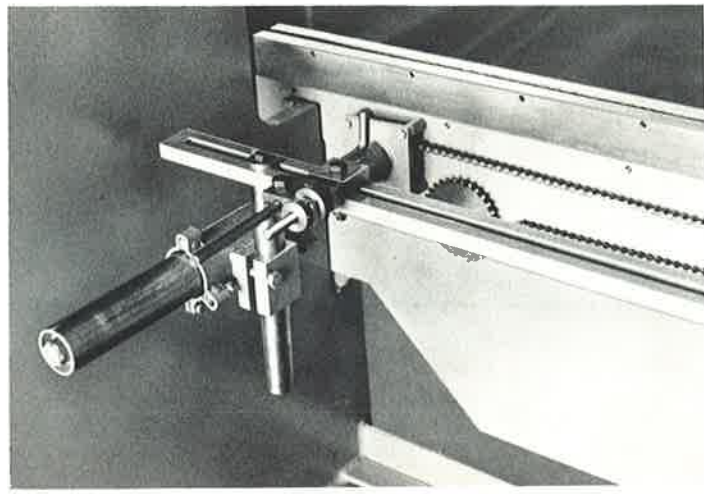
ACCURACY

SPEED

VERSATILITY



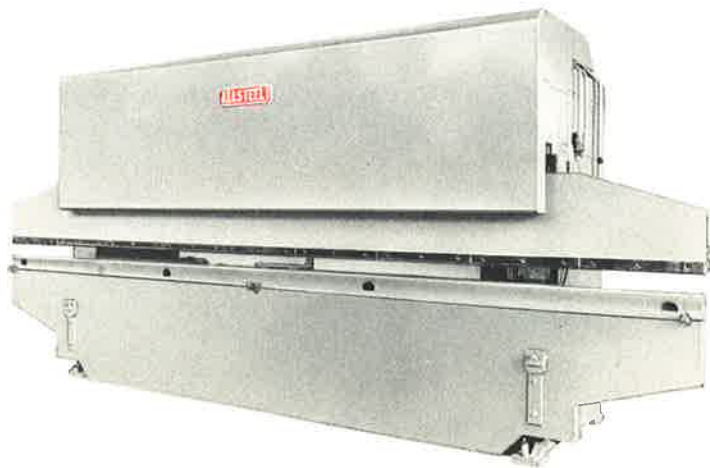
Push button controlled motorized drive for front operated back gauge.



Front operated micrometer back gauge with digital counter.

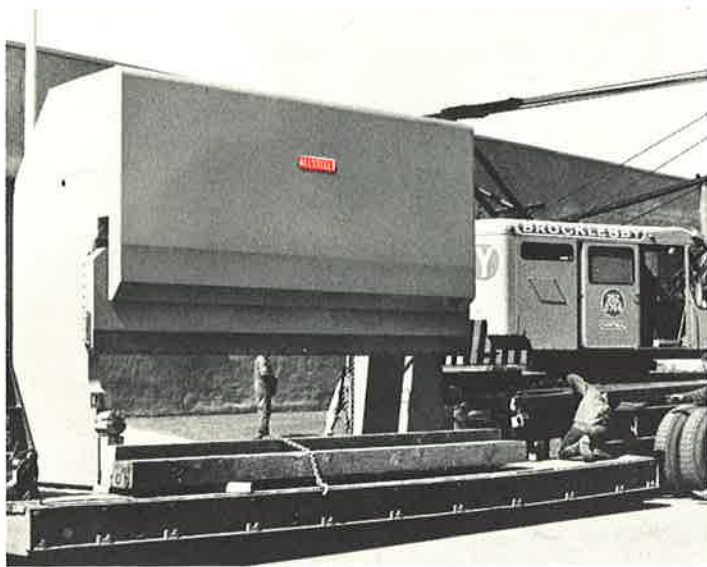


Extra heavy angles with bolster plates complete with dove tail slots.



Horn press brake: ram and bed extensions available as shown on both ends or one end only.

Due to **ALLSTEEL'S** continued research to improve quality and design, we reserve the right to modify the specifications to any of the machines listed without notice.



MODEL NO. 400 – 16: CAPACITY 400 TONS x 16 FT. (on it's way to another customer)

Guarantee

The **ALLSTEEL** press brake is guaranteed to perform its rated capacity on a production basis. Any parts that prove defective within one year from date of shipment will be replaced or repaired without charge.

Guarantee is void if unauthorized repairs are attempted.

ALLSTEEL**HYDRAULIC SHEARS
CAPACITIES: 10 GAUGE AND UP.****FEATURES**

- High carbon high chrome one piece four edge cincinnati standard knives.
- Power operated back stop with multi-speed drive: precision digital read out to .002".
- One pair disappearing front stops: 2 support arms: squaring arm with scale.
- High speed hydraulic drive.
- Independent hydraulic hold downs – automatically adjust hold down force with thickness of material being sheared: replaceable hold down feet.
- Rake angle adjustment from 0" to 7/16" per foot for extra fast distortion free cutting of light gauge materials.
- Overload protected motor starter: foot switch remote control: selector switch for continuous, inch, and non-repeat for safety: adjustable stroke length for notching.
- Standard gap 12", all steel welded frame construction: box structure ram and bed for extreme stiffness, ram incorporates adjustable tension bar and individual adjustable knife straighteners: ram adjustable for knife clearance: non-metallic ways: hardened and ground slides.
- Automatic central lubrication system.
- Table and support arms equipped with ball transfers (not standard for machines under 1/4" capacity).

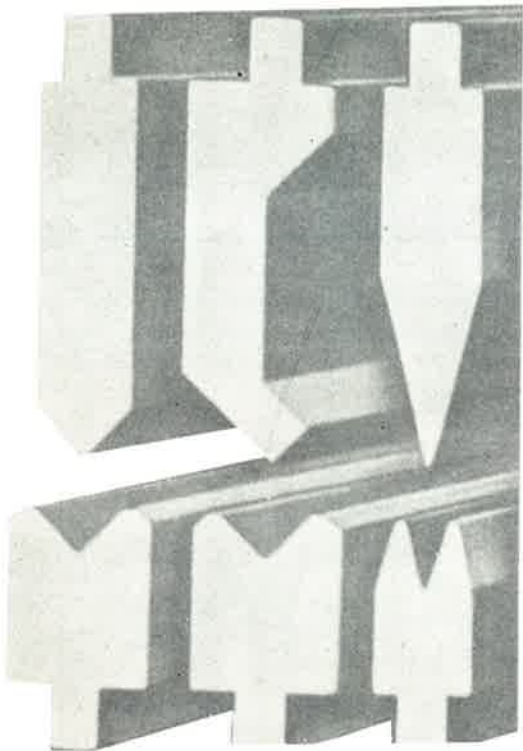
ALLSTEEL**HYDRO-MECHANICAL PLATEN PRESS
CAPACITIES: 100 TONS AND UP. PLATEN:— WIDTH 3' OR 4' x 8'2", 10'2" AND 12'2".****FEATURES**

- Solid steel all welded construction: interlocked components.
- Box type ram – 8 point guiding: non-metallic ways: full length guides.
- Box type bed – cushion available as an option. (extra cost).
- Single hydraulic cylinder and heavy mechanical linkage assure precise parallel bottoming.
- Variable stroke length and speed.
- High speed hydraulic drive: overload protected motor starter, foot switch remote control (or palm safety buttons) pedestal mounted controls optional. (extra cost).

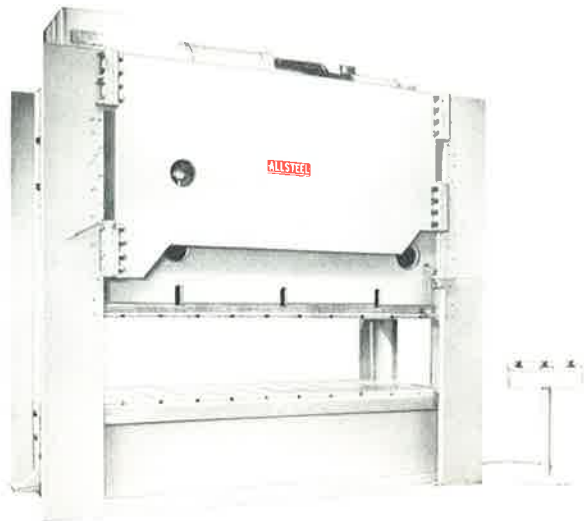
ALLSTEEL**HYDRAULIC STRAIGHT SIDE PRESS
CAPACITIES: 100 TONS AND UP.****FEATURES**

- All steel welded construction: interlocked components.
- Box type ram – 8 point guiding: full length, non-metallic ways. Hardened slides.
- Cushion capacity – as required: stroke variable.
- Overload protected magnetic starter control: safety palm buttons: selector switches for manual – automatic cycle.
- Control system to customer specifications.
- Thermostat controlled oil cooler.

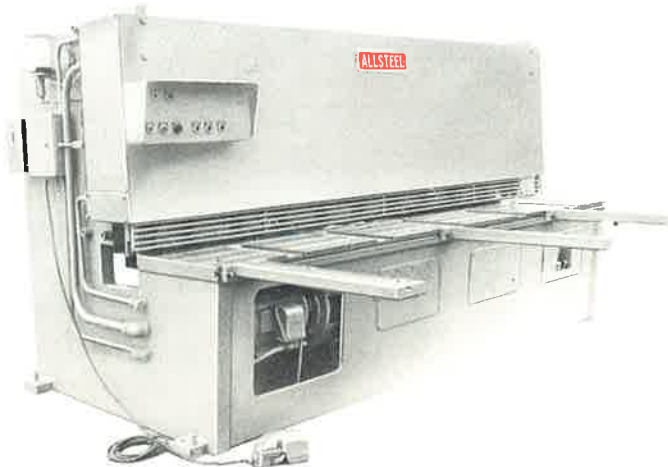
OTHER ALLSTEEL PRODUCTS



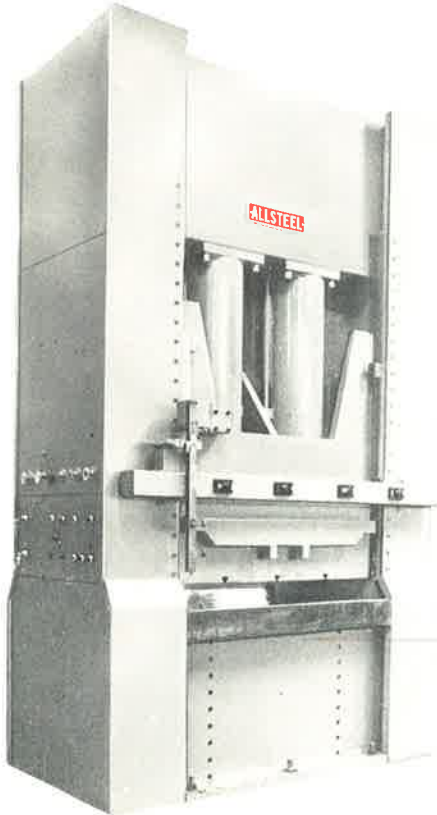
A COMPLETE LINE OF ALLSTEEL DIES FOR ALL MAKES OR SIZES OF PRESS BRAKES.



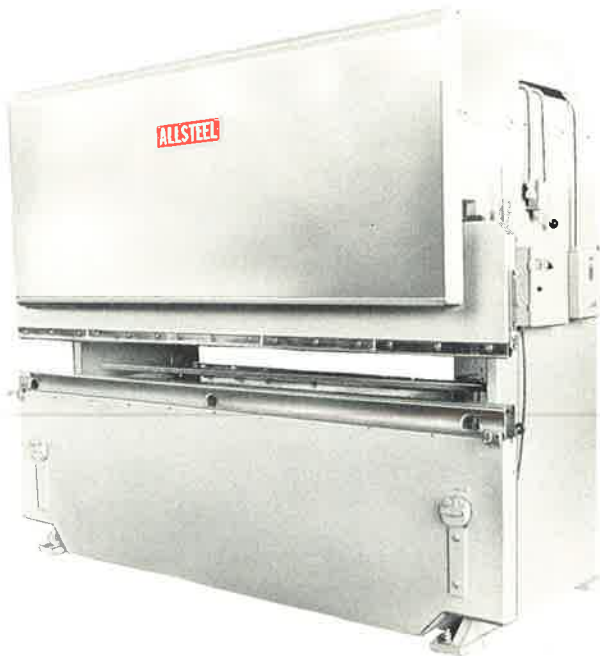
ALLSTEEL MODEL P400-4-10 PLATEN PRESS: CAPACITY: - 400 TONS, 4 FT. WIDE x 10'2" LONG.



ALLSTEEL MODEL 1/4 - 10: HYDRAULIC SHEAR: CAPACITY: - 1/4" THICK M.S. x 10 FT.



ALLSTEEL MODEL SS500-4-5 HYDRAULIC PRESS: CAPACITY: 500 TONS, 4' x 5' BED.



ALLSTEEL MODEL NO. 120-12 HYDRO-MECHANICAL PRESS BRAKE.

SEPARATE CATALOGUE ARE AVAILABLE FOR THE ABOVE EQUIPMENT.

PRESS BRAKE BENDING CHART

Tons required per linear foot to bend mild steel having 60,000 PSI tensile strength.

Thickness of Metal		WIDTH OF V DIE OPENING																							
Gauge	Inches	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	10"	12"	
20	0.036	3.1	2.3	1.7	1.4	1.1																			
18	0.048	5.3	4.0	3.0	2.5	2.2	1.7	1.3																	
16	0.060	9.6	7.1	5.6	4.5	3.8	2.8	2.2	1.8	1.5															
14	0.075		11.9	9.2	7.6	6.3	4.7	3.5	3.0	2.5	2.1	1.8													
12	0.105				16.7	13.1	9.7	8.0	6.5	5.6	4.6	4.1	3.2												
11	0.120					19.2	14.2	11.1	9.0	7.5	6.3	5.5	4.4	2.9											
10	0.135						18.6	14.5	11.9	9.9	8.5	7.3	5.8	4.0											
3/16	0.188							27.4	23.1	19.3	16.4	14.3	11.2	7.5	5.7	4.4									
1/4	0.250									39.4	33.3	29.5	22.7	15.4	11.4	9.0	7.4	6.1							
5/16	0.313											50.4	39.8	27.0	19.7	15.3	12.7	10.5	7.7						
3/8	0.375												61.6	42.3	30.9	24.0	19.6	16.3	12.3	9.5					
7/16	0.438													61.7	45.8	35.4	28.6	24.4	17.3	14.8	11.2				
1/2	0.500														85.2	63.6	48.8	39.7	33.3	24.6	19.4	15.9	13.1		
5/8	0.625															110.0	86.2	70.0	58.3	43.1	33.3	27.4	23.3	16.9	
3/4	0.750																138.0	110.0	93.0	68.7	53.5	43.6	36.5	27.1	21.0
7/8	0.875																	165.0	137.0	104.0	80.7	64.6	52.9	39.7	31.6
1	1.000																		197.0	143.0	113.0	91.2	76.2	56.3	44.2

The tonnages indicated in black boxes are for die openings 8 times thickness of metal.

With an 8 to 1 die ratio the inside radius of a right angle bend is approximately equal to the thickness of the material. Bending pressures for other metals, as compared to mild steel on chart, are as follows: Soft brass — 50% of pressure shown; soft aluminum — 50% of pressure shown; aluminum alloys heat-treated — same as steel; stainless steel — 50% more than steel; chrome molybdenum — 100% more than steel.

All of the above bending pressures are nominal and represent average conditions. These values are dependent upon the radii of the dies, the yield strength of the material, the temper of the material, the direction of the rolling strains, etc. THEREFORE A SAFETY FACTOR OF AT LEAST 20% SHOULD BE PROVIDED IN SELECTING A PRESS FOR A GIVEN JOB.

PRESS BRAKE PUNCHING CHART

Tons required per hole to punch mild steel having 60,000 PSI tensile strength.

HOLE DIAMETER		1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Metal Gauge		.125	.1875	.250	.3125	.375	.4375	.500	.5625	.625	.6875	.750	.8125	.875	.9375	1.000
Thickness Inches	PRESSURE IN TONS															
28	.015	.2	.2	.3	.4	.4	.5	.6	.7	.7	.8	.9	1.0	1.1	1.2	1.3
26	.018	.2	.3	.4	.4	.5	.6	.7	.8	.9	1.1	1.2	1.3	1.4	1.5	1.6
24	.024	.2	.4	.5	.6	.7	.8	.9	1.1	1.2	1.3	1.4	1.5	1.6	1.8	1.9
22	.030	.3	.4	.6	.7	.9	1.0	1.2	1.3	1.5	1.6	1.8	1.9	2.1	2.2	2.4
20	.036	.4	.5	.7	.9	1.1	1.2	1.4	1.6	1.8	1.9	2.1	2.3	2.5	2.6	2.8
18	.048	.5	.7	.9	1.2	1.4	1.6	1.9	2.1	2.4	2.6	2.8	3.1	3.3	3.5	3.8
16	.060	.6	.9	1.2	1.5	1.8	2.1	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.7
14	.075	.7	1.1	1.5	1.8	2.2	2.6	2.9	3.3	3.7	4.0	4.4	4.8	5.1	5.5	5.9
12	.105	1.0	1.5	2.1	2.6	3.1	3.6	4.1	4.6	5.1	5.7	6.2	6.7	7.2	7.7	8.2
11	.120	1.2	1.8	2.4	2.9	3.5	4.1	4.7	5.1	5.9	6.2	7.1	7.6	8.3	8.8	9.4
10	.135	1.3	2.0	2.6	3.3	4.0	4.6	5.3	5.9	6.6	7.3	7.9	8.6	9.2	9.9	10.6
5/32"	.157	—	2.3	3.1	3.8	4.6	5.4	6.1	6.9	7.7	8.4	9.2	10.0	10.7	11.5	12.3
3/16"	.188	—	2.8	3.7	4.6	5.5	6.4	7.4	8.3	9.2	10.1	11.0	12.0	12.9	13.8	14.8
1/4"	.250	—	—	4.9	6.1	7.4	8.6	9.8	11.1	12.3	13.5	14.7	16.0	17.2	18.4	19.7
3/8"	.375	—	—	—	—	11.1	12.8	14.8	16.5	18.5	20.2	22.1	23.8	25.8	27.5	29.5
1/2"	.500	—	—	—	—	—	—	19.7	22.0	24.6	26.9	29.5	31.8	34.4	36.8	39.4
5/8"	.625	—	—	—	—	—	—	—	—	30.8	33.7	36.9	39.9	43.0	46.0	49.2
3/4"	.750	—	—	—	—	—	—	—	—	—	—	44.3	47.7	51.7	55.2	59.0
1"	1.000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	60.0

For smooth trouble-free operation, the punching tonnage should not exceed two-thirds of the rated capacity of the press. In multiple punching set-ups, the punches should be stepped by setting punches at different levels. If the punches are on two levels, the punching pressure required may be divided by two. If they are set on three levels, the pressure may be divided by three.

