

8
Stroke
Actions
Create
the
Perfect
Forming
Touch



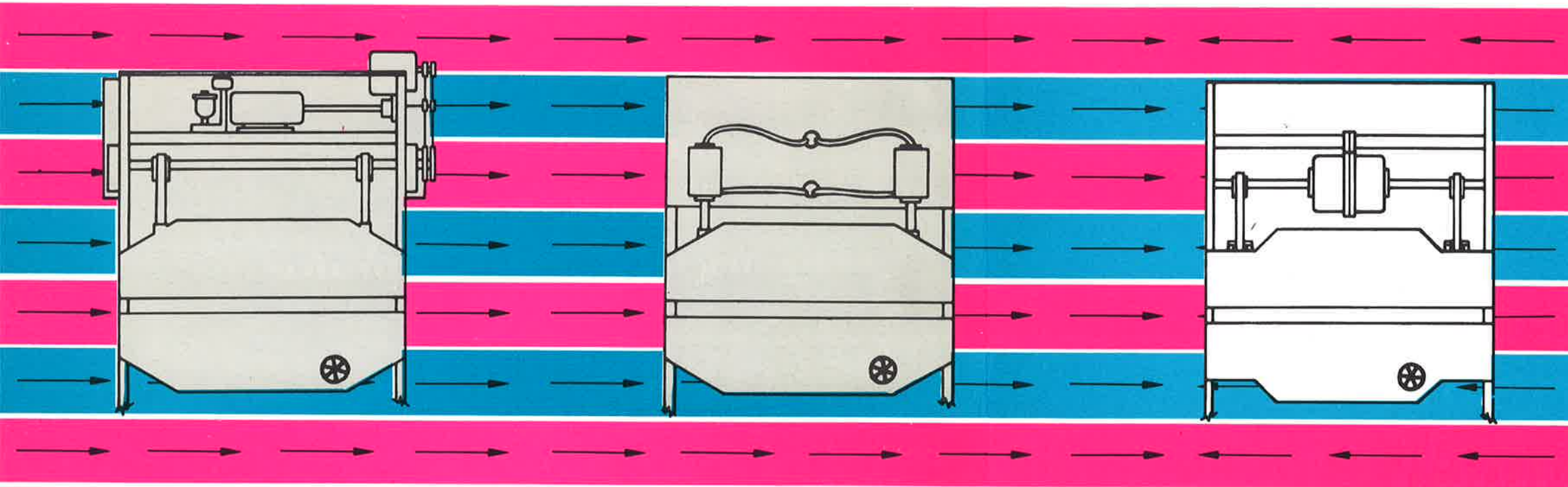
di-acro

**with Di-Acro's
new HM series
hydra-mechanical press brake**

HYDRA-MECHANICAL DESIGN

Choosing between hydraulic and mechanical press brakes can be frustrating — each has advantages that the other lacks. Hydraulic press brakes are highly controllable but lack ram rigidity and accuracy. Mechanical press brakes are rigid and accurate, but require a skilled operator and lack control-ability.

Di-Acro press brakes, because of exclusive “Hydra-Mechanical” design, are able to provide the advantages of both hydraulic and mechanical press brakes. Power is supplied by a rotary hydraulic cylinder which drives the ram through mechanical linkage, thus maintaining the accuracy and rigidity of mechanical drive while making possible the infinite control and safety of hydraulic operation.



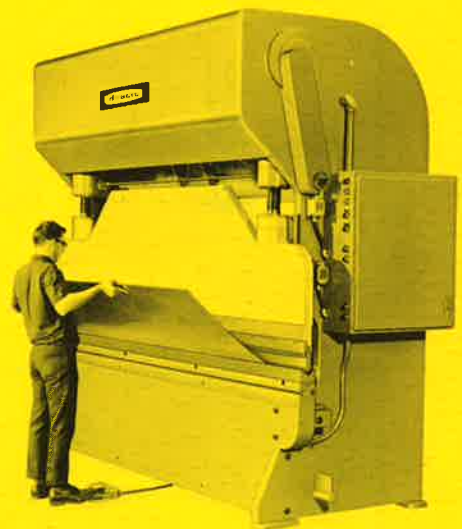
MECHANICAL press brakes have a rigid drive and a positive ram level — but engaging and disengaging a rapidly revolving flywheel makes control difficult and imposes much wear on the parts.

HYDRAULIC press brakes, on the other hand, have an easily controlled movement — but with separate cylinders driving each end of the ram, the level is difficult to maintain.

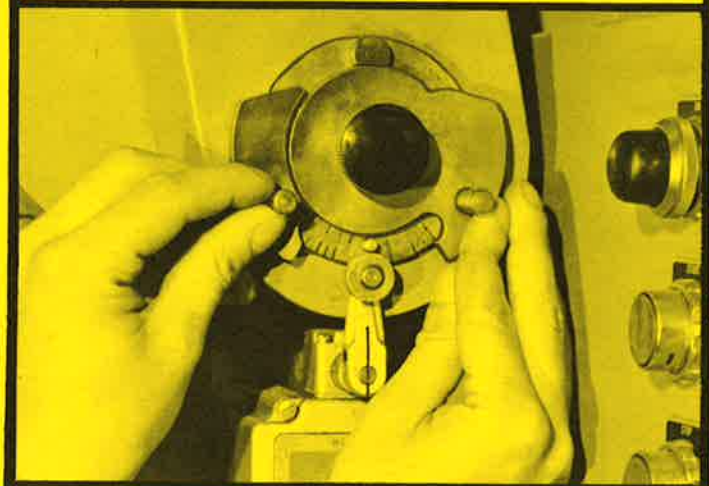
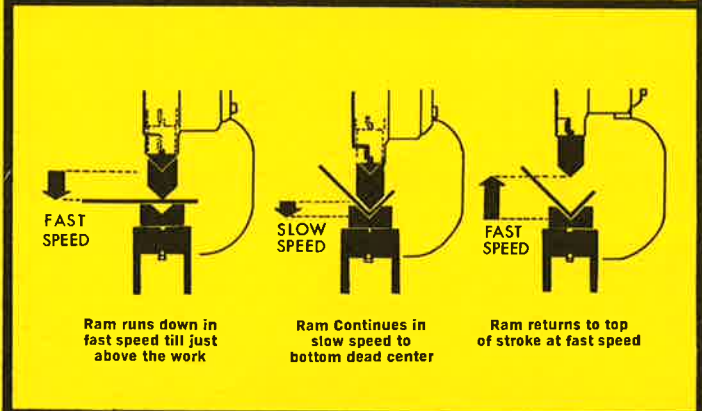
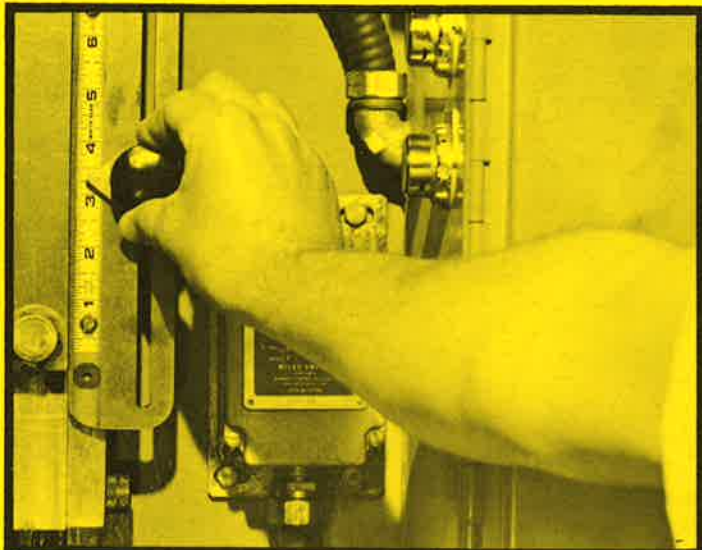
DI-ACRO HYDRA-MECHANICAL press brakes give you the stroke control of the hydraulic machines — plus the rigid arm linkage of the mechanical machines, always on the level.

CONTROL

is the name
of the game!



Di-Acro's 135-Ton Press Brake, with exclusive "Hydra-Mechanical" design, offers the advantages of both hydraulic and mechanical operation. The ram is mechanically linked to a rotary hydraulic cylinder, so it can be inched, stopped, or reversed at any time YET cannot be forced out of alignment – even when working off center. Eight stroke actions – "Jog", "Slow", "Fast", "Dual", "Single Stroke", "Continuous", "Fast-Stop-Slow", "Reverse". All help to give the control so critical in preventing dangerous material whipping and kinking. These features also help to control the forming operation so the operator can start, stop or reverse the stroke whenever he pleases. Whether working with back gauges, scribed line, or special gauges, the Di-Acro 135-Ton Press Brake will accommodate the operation to give you peak safety and efficiency.



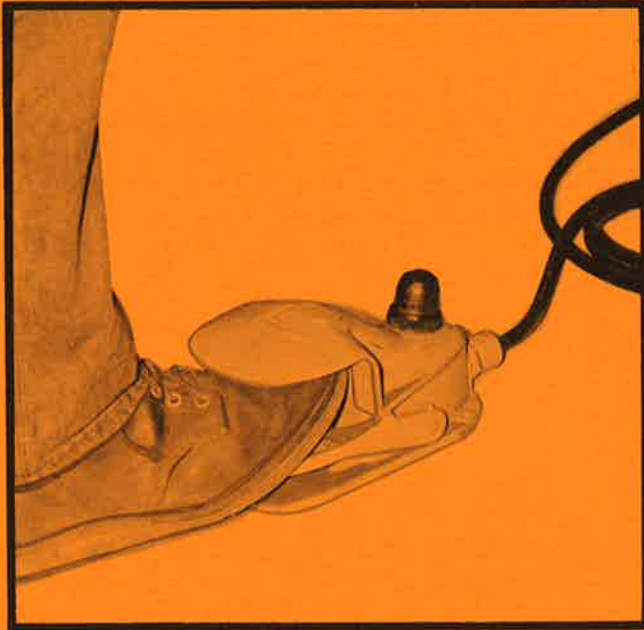
here's what you get

Stroke Speed Control – One switch on the panel controls the ram speed. It may be set for “Slow”, “Dual”, or “Fast-Stop-Slow”. Set for “Dual”, the ram will approach the material at top speed, slow down for the work portion of the stroke, and return at top speed. This feature eliminates dangerous material whipping and the resulting rejects due to back bending.

With the switch set for “Fast-Stop-Slow”, the ram will approach the material at top speed and stop at a pre-selected point for positioning material when working to a scribed line or with back gauges. The foot pedal must be re-activated for the ram to continue through its stroke – at slow speed for the forming operation and at top speed returning to the top of the stroke. A separate adjustment (photo, left) controls the point at which the slow portion of the Dual Speed Cycle begins and the stopping point when operating with “Fast-Stop-Slow”. With the machine set for “Dual” or “Fast-Stop-Slow” and the adjustment off the stroke portion of the scale, the stroke will be fast throughout.

Stroke Length Adjustment (optional) – In less than 15 seconds

the stroke length can be adjusted to suit the job. The shorter the stroke, the more strokes per minute. In addition, the narrow opening helps to keep fingers out of the work.



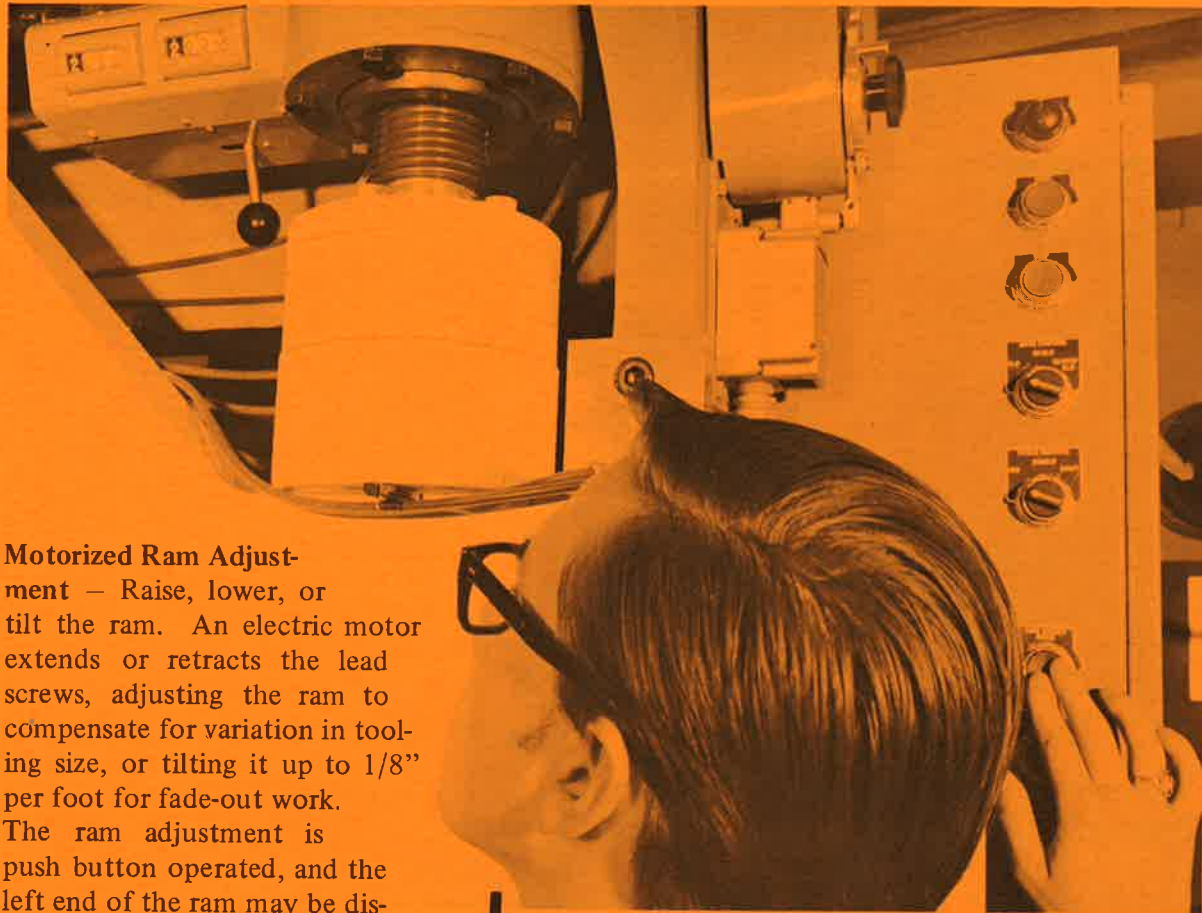
Ram Start-Stop Reverse —

A remote control foot pedal allows the operator to stand in the most convenient production position. The ram stops instantly when the foot pedal is released during the down-stroke (or anywhere when machine is set on "Jog"). A switch on the front of the foot pedal reverses the ram direction at any stopped position within the cycle. After bottoming, the ram automatically returns to the top of stroke, except when the control switch is set on "Jog".



"Select-A-Cycle" Control —

Three stroke cycles, "Jog", "Single Stroke" and "Continuous" are available by simply flipping the switch. "Jog" allows the operator to inch the ram down at slow speed, stopping instantly anywhere during the stroke whenever he releases the pedal. The foot pedal must be depressed each time to cycle the machine on "Single Stroke", but the machine will continue to cycle when set on "Continuous".

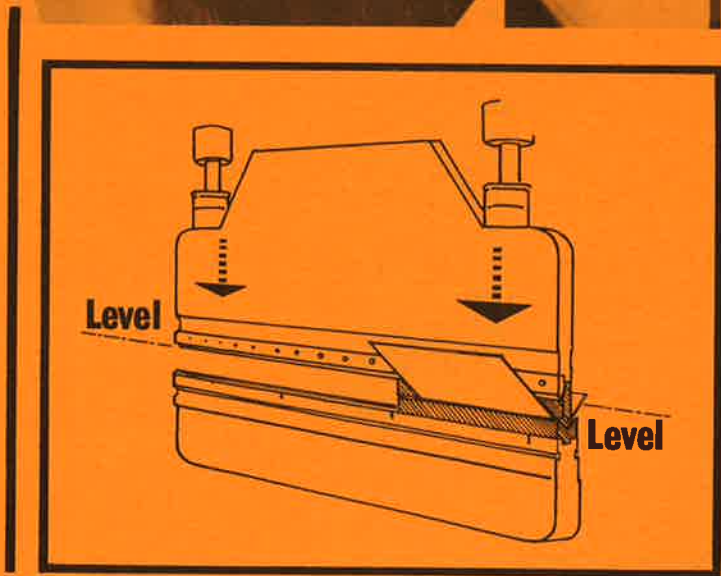


Motorized Ram Adjust-

ment – Raise, lower, or tilt the ram. An electric motor extends or retracts the lead screws, adjusting the ram to compensate for variation in tooling size, or tilting it up to 1/8" per foot for fade-out work. The ram adjustment is push button operated, and the left end of the ram may be disengaged by flipping a lever. When disengaged, only the right end of the ram will raise or lower, thereby tilting the ram for fade-out work. Dial indicators calibrated to .001 inch are located near the control panel so they can be watched during the adjustment.

Mechanically Rigid Ram –

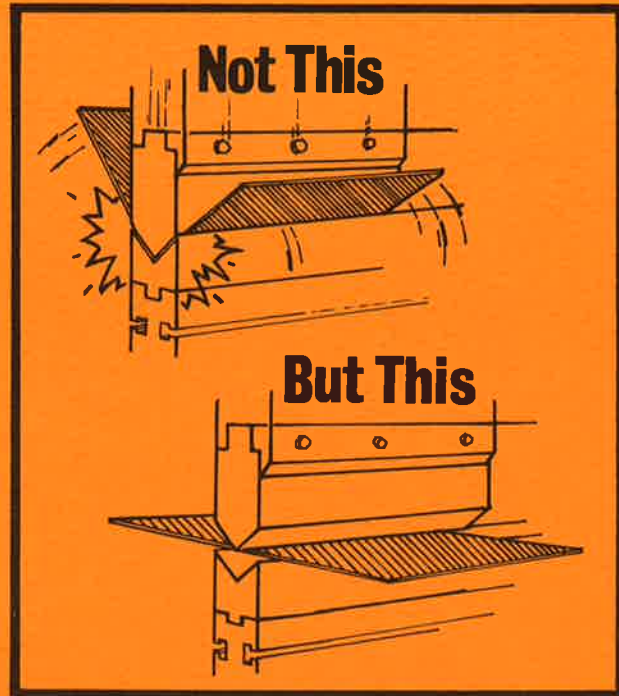
Linkage from the rotary cylinder consists of an eccentric on the drive shaft which operates the pitman at each end of the ram. Since only one rotary cylinder supplies the power to both ends of the ram simultaneously, the force exerted is uniform along the entire length of the ram. The ram level is rigid and will be maintained even when working off center as with side-by-side dies. The rigid linkage assures ram alignment for perfect and accurate bends.



here's what it will do for you

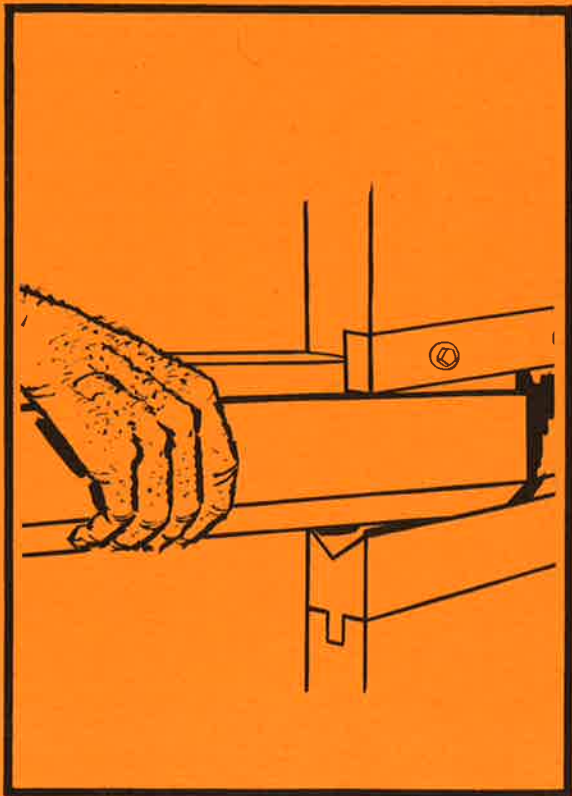
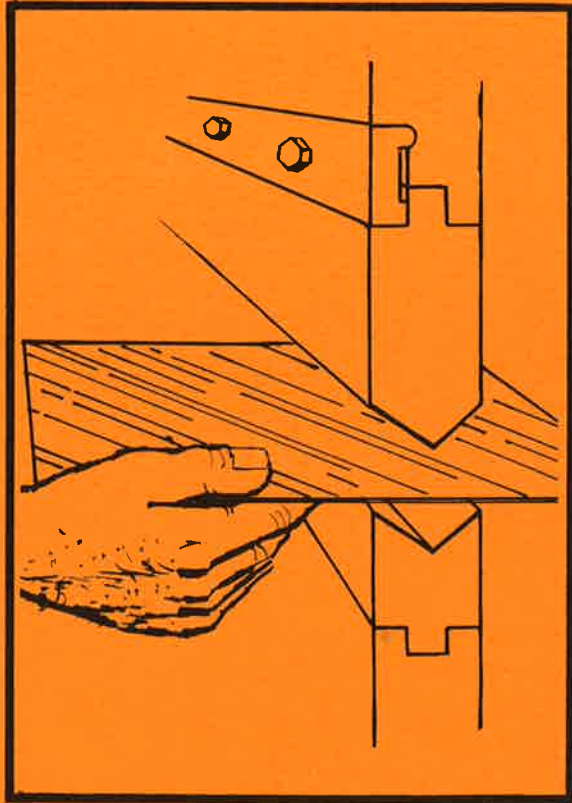
Faster, More Efficient Production — because you'll have less waste. Longer sheets can be formed without whipping or kinking with the "Dual Speed" cycle, yet high production rates are easily maintained. With the machine set to "Jog", it's no problem to "inch" down on a piece for scribed line work. When handling extra large sheets, "Fast-Stop-Slow" allows the operator to bring the ram at top speed to material touch-down, position the piece with the ram stopped, and form the piece with a slow ram speed. Since the ram automatically returns to the top of stroke (except when machine is set on "Jog") at top speed after bottoming, higher production rates are possible.

Less Operator Skill Required — since control is built into the machine. The operator doesn't need the ability to "slip" clutches. Inching the ram is easy for anyone, and the ram stops instantly whenever the operator removes his foot from the pedal. Jamming is virtually eliminated because the ram direction may be reversed from any stopped position by stepping the switch on the front of the foot pedal. Overloading can't hurt the machine — when overloaded, a by-pass valve relieves excess pressure in the hydraulic system.



Safety For Your Operators — is assured because “Dual Speed” operation eliminates dangerous material whipping, and adjusting to the shortest stroke possible helps to keep fingers out. “Fast-Stop-Slow” allows the operator to bring the ram down at full speed and have it stop at a pre-selected height above the work. When the foot pedal is re-actuated, the ram will form the part at slow speed and automatically return to the top of stroke at full speed. The remote control foot pedal allows the operator to stand clear of the work. If for any reason he changes his mind during a stroke, he can immediately stop the ram by removing his foot from the pedal, and reverse the ram direction by stepping the switch on the front of the foot pedal.

Quick Setup — will leave extra time for the production run. Sensitive “inching” of the ram makes it easy to locate the bottom of the stroke. Other standard features such as motorized ram adjustment and immediate stop-reverse are indispensable for fast setup. Side operated and motorized back gauges are available to further aid the setup man.



accessories

Side Operated Micrometer Back Gauge – Parallel adjusting gauge moves into position quickly with a smooth-working handwheel. Critical material gauging is assured by a built-in indicator dial calibrated to .001 of an inch. Two micrometer stops and two standard stops are included for independent adjustment of ends.

Power Operated Micrometer Back Gauge – Especially useful when jobs are changed often, the power operated back gauge offers rapid change of the back gauge adjustment even when moving from extreme to extreme. The same accurate indicator calibrated in .001 of an inch. Two micrometer stops and two standard stops included for independent adjustment of ends.

Trabon Lubrication Pump – Add this unit to your centralized grease lubrication system to save time and trouble. Pumping the handle supplies grease to all necessary points.

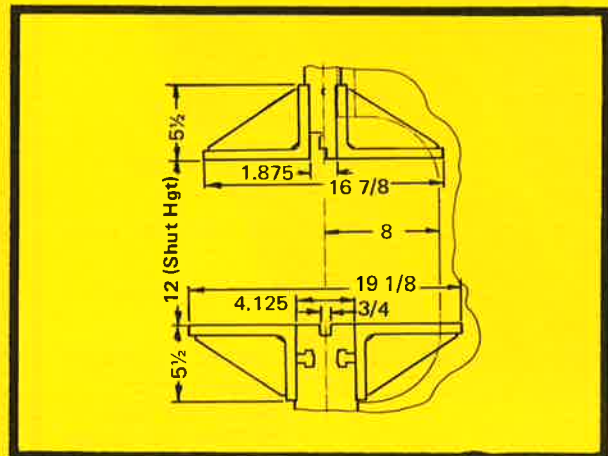
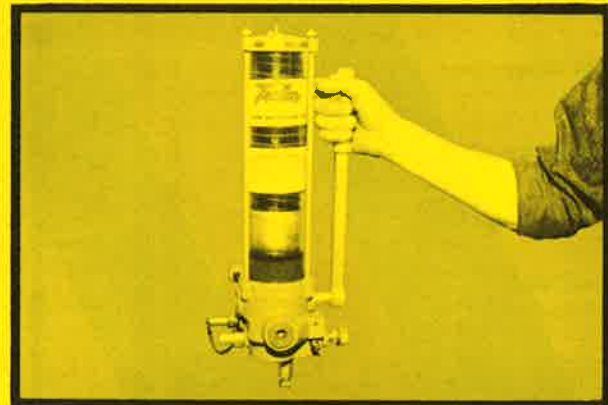
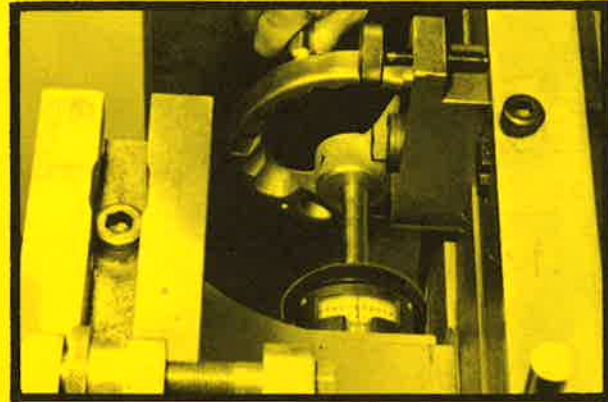
Stroke Length Adjustment – Set to the shortest possible die opening to keep fingers out. Make more strokes per minute with shorter stroke.

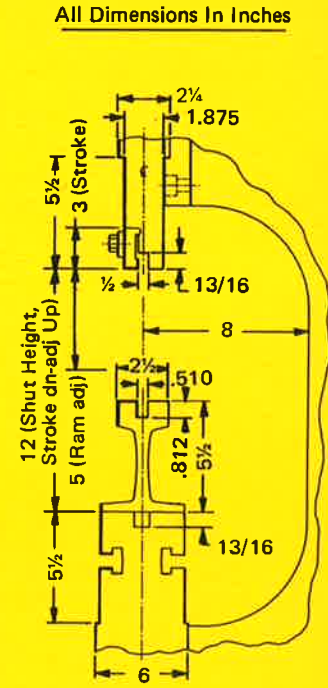
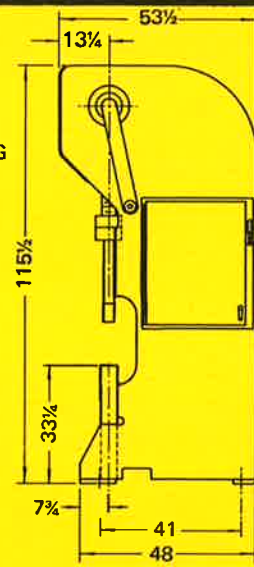
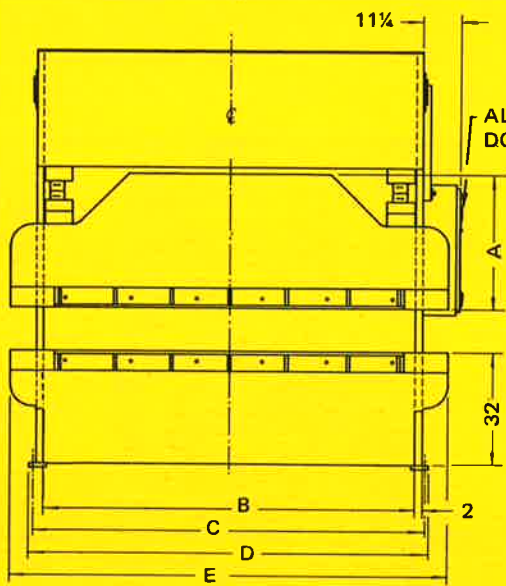
Machined Bed and Ram – for use with angle brackets and bolster.

Angle Brackets (See drawing, right)
(inside housings)

Additional Micrometer Stops
for back gauge

Other Accessories Include: Dual Hand Trip or Dual Foot Trip Control, Fused Disconnect, Bed and Ram Extensions, Extra Throat Depth, Extra Shut Height, Extra Stroke, or Bolster Plates.





All Dimensions In Inches

SYM	DESCRIPTION	135-10	135-12
A	Height of Ram	37	41
B	Distance Between Side Frames	102	126
C	Mounting Holes In Foot Pads	108 3/4	132 3/4
D	Width of Base	111 1/4	135 1/4
E	Width of Bed & Ram	120	144

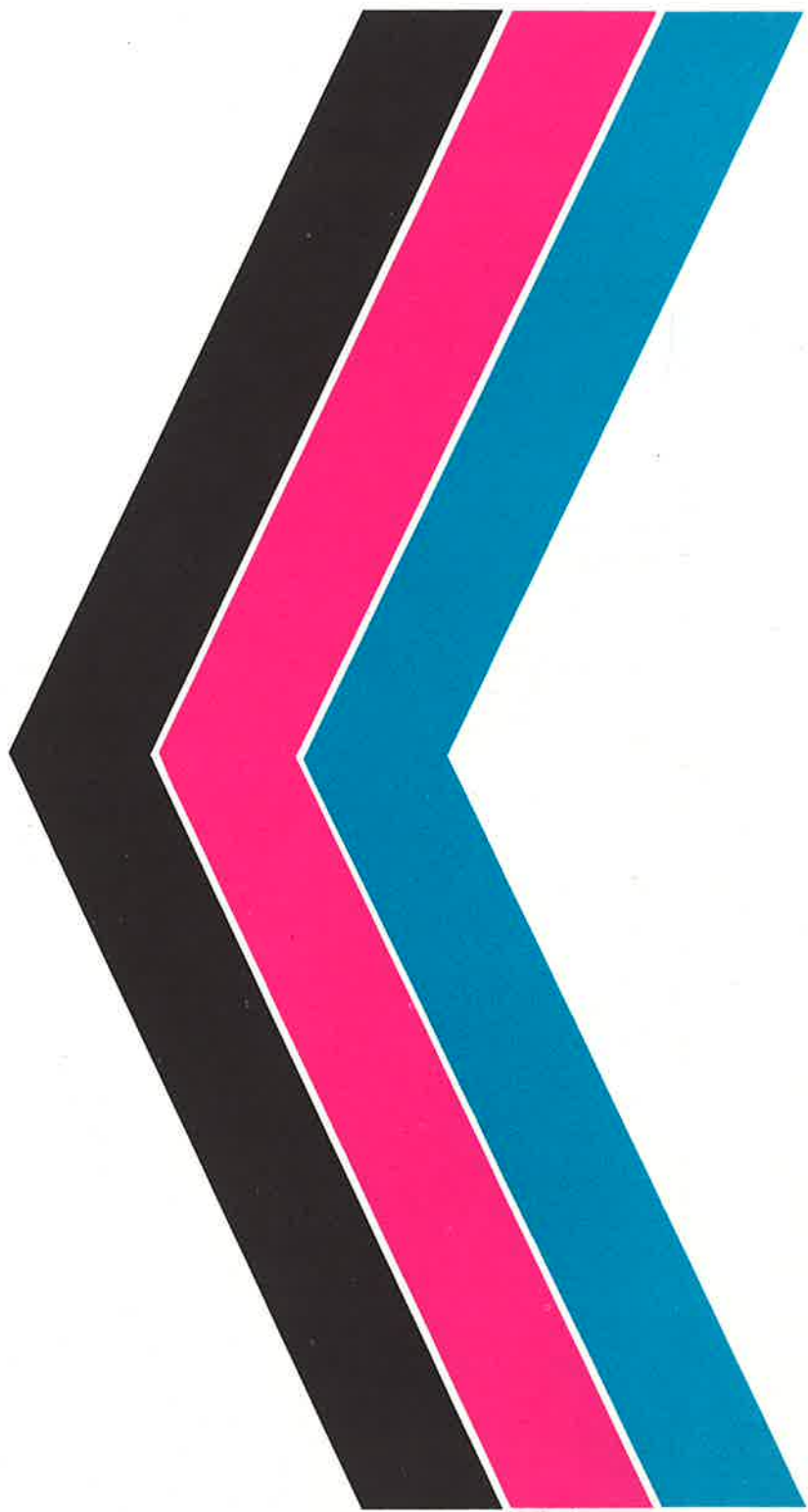
Model Number	135-10	135-12
Length of Bed and Ram	120"	144"
Clear Distance Between Housing	102"	126"
Back Gauge Range	28"	28"
Stroke of Ram (Max.)	3"	3"
Ram Adjustment	5"	5"
Shut Height - Ram Up Stroke Down	12"	12"
Throat Clearance from Center of Dies	8"	8"
Frame Plates	2"	2"
Bed Plate	6"	6"
Ram Plate	2 1/4"	2 1/4"
Floor Space	48" x 120"	48" x 144"
Height	115 1/2"	115 1/2"
Weight lbs. Shipping	21,200 lbs.	23,800 lbs.
Bending Capacities, Mild Steel -	90 Inches of 1/4" 140 Inches of 3/16" 200 Inches of 10 Gauge	

construction features

Rolled steel plate weldment with box-type crown assures maximum rigidity and permanent alignment. Bed and ram are rolled steel plate with extra depth and cross section, insuring minimum deflection under load. Ram liners are non-metallic for longer wear and reduced friction. Tilting of the ram is made possible through ball joint ram-to-pitman connections. Replaceable bronze seats provide minimum friction throughout the stroke. Power unit is time proven; located on top of the machine to keep work area behind the machine unrestricted. Easy maintenance is assured because all parts are easily accessible and removeable. All switches are plug-in type, and all controls are centrally located. No special foundation is required - any floor which can support the machine's weight is sufficient.

standard equipment

Select-A-Cycle Control (Jog, Single Stroke, or Continuous), Stroke Speed Control (Slow, Dual, or Fast-Stop-Slow), Motorized Ram Adjustment. Remote Control Foot Pedal, Centralized Grease Lubrication System (A central fitting greased with a standard grease gun supplies the machine with grease), Full Electricals including 230-460 V (specify) AC 3-phase 60 cycle motor. Step-down Transformer provides 115 V supply to all controls. Electricians comply with JIC EGP-1-1967. Universal Back Gauge (back operated) adjusts both vertically and horizontally. Die holder and sectional ram clamps also included.





DI-ACRO

division of



LAKE CITY, MINNESOTA 55041