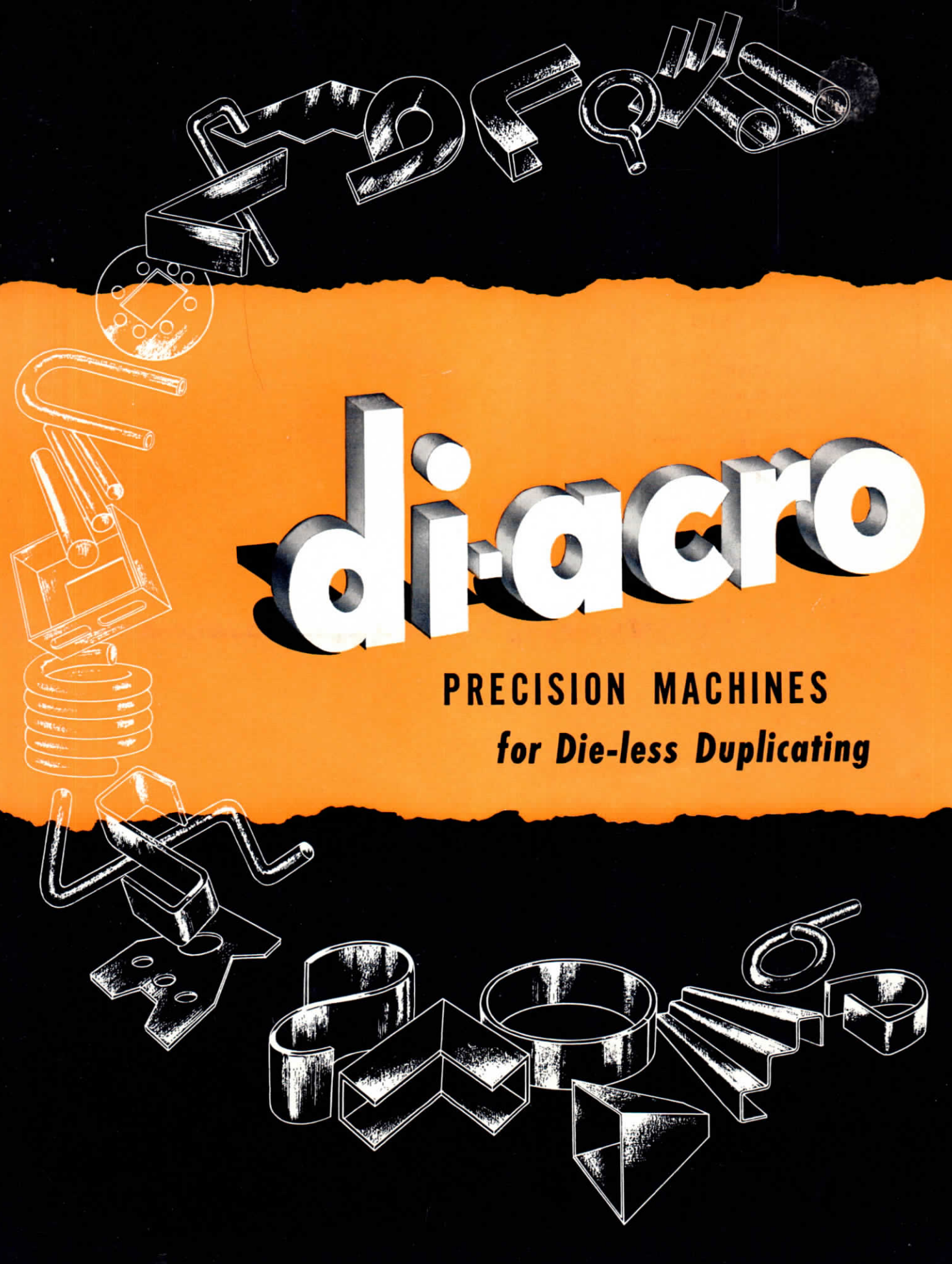




di-acro

PRECISION MACHINES

for Die-less Duplicating

DISTRIBUTED
BY
W. J. FOSS COMPANY
112-114-116 BROADWAY
SPRINGFIELD 3, MASS.



DI-ACRO ENGINEERING SERVICE



The experience accumulated by Di-Acro engineers over a period of many years in solving thousands of duplicating problems enables them to be of real assistance to you.

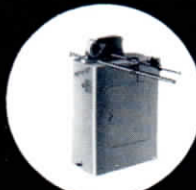
If you will send us blueprints, sketches or samples of your parts, our Engineering Department will submit detailed recommendations for your consideration.

Di-Acro Engineering Service is available without cost or obligation to present users of Di-Acro Equipment to increase the potential of these efficient units as well as to all prospective customers who have duplicating requirements within the range of Di-Acro Precision Machines.

O'NEIL-IRWIN MFG. CO., LAKE CITY, MINNESOTA, U. S. A.



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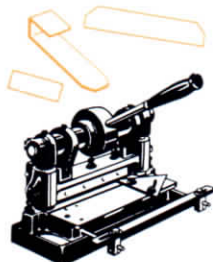
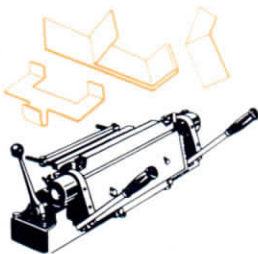
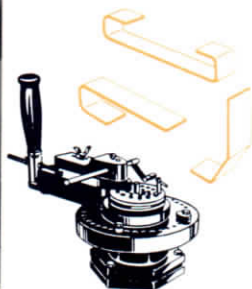
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THE *di-acro* SYSTEM OF DIE-LESS DUPLICATING

IN THE SPACE OF A FEW SHORT YEARS, the Di-Acro System of Die-Less Duplicating evolved from an engineer's dream to a basic industrial technique employed in experimental laboratories, model shops and production departments everywhere.

Because of a positive need for equipment which would rapidly produce an unlimited variety of precision parts without dies, Di-Acro engineers designed and perfected the first Die-Less Duplicating unit, the DI-ACRO BENDER.

The immediate and enthusiastic reception given this excellent tool by industry encouraged the early development of additional types of machines that would perform basic operations required in production of parts normally produced through the use of dies.



*producing
a chassis*

and panel



Here is an excellent example of Die-Less Duplicating at work completely producing a chassis in the Chicago Plant of Radiation Counter Laboratories, Inc.

Shearing stock to the exact size required in the finished part is quickly and accurately accomplished with the DI-ACRO SHEAR. The ease of operation built into this precision machine makes it ideal for women operators.

Notching the corners of the blank is a simple operation for the DI-ACRO NOTCHER with the dimensions of the notches accurately controlled by built-in gauges that can be easily adjusted for any size notch.

The numerous holes of various sizes and shapes required in the chassis are quickly perforated with the DI-ACRO PUNCH PRESS. Because a limited number of pieces are

Di-acro

**Power Equipment
for high speed
Die-Less Duplicating**

DI-ACRO now offers a complete
line of power machines to
speed your long run
production operations

One by one these new tools have been added to the Di-Acro Line of Die-Less Duplicating Machines until today a total of nine different basic types are available in numerous models to cover a wide range of materials.

Although many of these machines have their counterpart in heavy metal working equipment, only DI-ACRO offers a complete line of precision machines designed for both short run operations and high speed production through Die-Less Duplicating.

Throughout this booklet we have attempted through illustration and printed word to give you an appreciation of the range of operations possible by both the individual operation or cooperative application of these truly fine machine tools. Your careful consideration will be generously repaid.

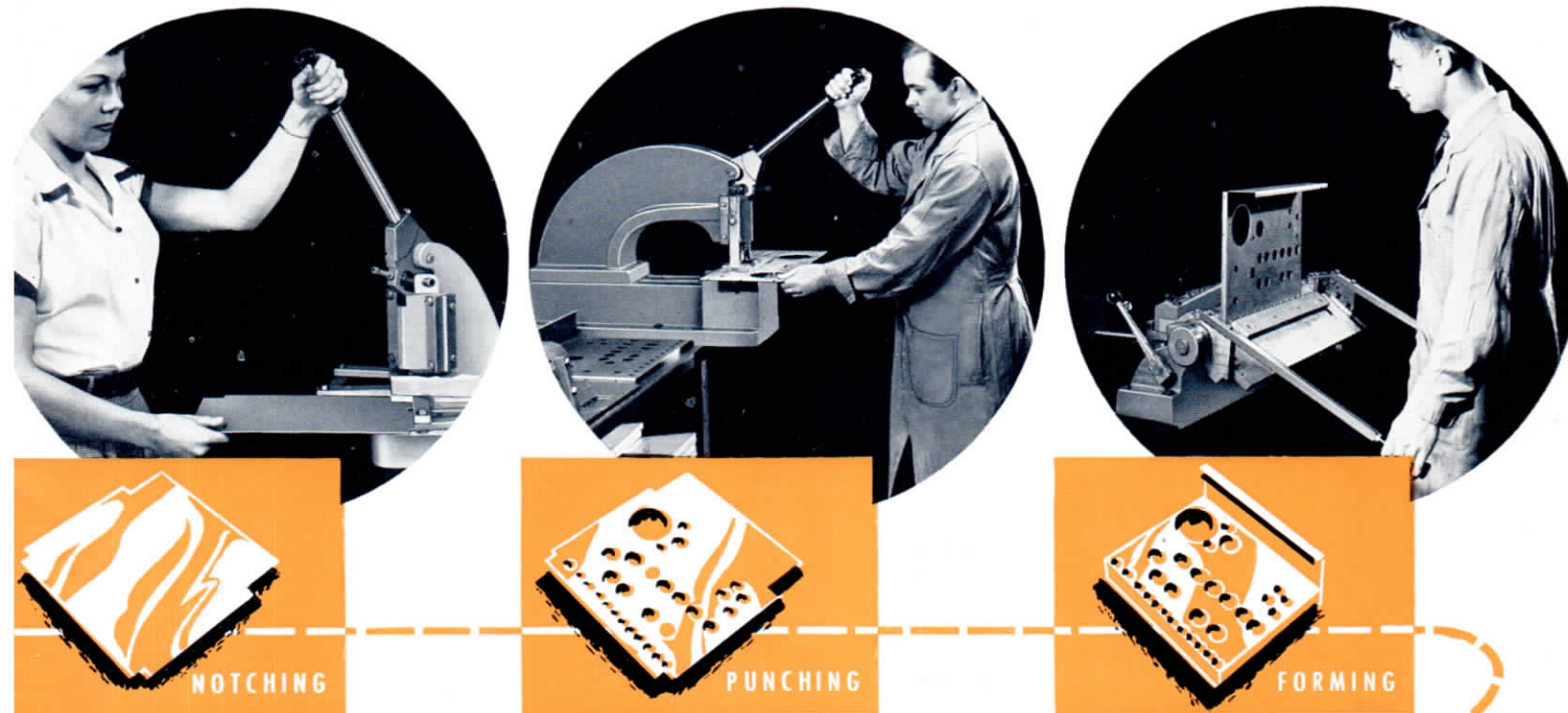
Originally designed for manual operation, DI-ACRO MACHINES have been found so ideal for high speed production that one by one they have been offered with a power

drive. In each power machine the perfect combination of practical engineering and modern design have made every model a leader in its field.

Now that the Di-Acro System of Die-Less Duplicating has been tested and proven over a period of many years in every conceivable operation and circumstance it seems reasonable to say that this industrial technique is one of the really new production ideas perfected during the past decade.

Because the potential of Die-Less Duplicating is practically unlimited, Di-Acro engineers are constantly engaged in designing additional types of duplicating machines and developing new uses for present models of DI-ACRO EQUIPMENT.

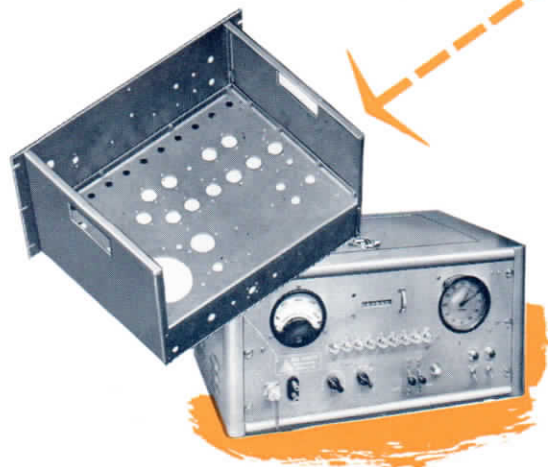
As you face the horizon of tomorrow with its problems, challenges and opportunities, you can continue to look to DI-ACRO for a continuous flow of new equipment that will exactly duplicate precision parts.



produced at one time it has been found advantageous in this operation to locate the holes by using a master template keyed to the blank.

The completed blank is accurately formed to the desired shape on the DI-ACRO FINGER BRAKE. With capacities to 16 gauge steel this precision machine covers a wide range of materials.

Because of the specialized nature of their products and constant new developments in the electronic field, Radiation Counter Laboratories, Inc. require innumerable sizes and types of chassis. This would involve tremendous die expenditures were they to be produced in a conventional manner but due to the flexibility of DI-ACRO PRECISION MACHINES this problem is readily solved.



Die-Less Duplicating with **di-acro** BENDERS

As a "Die-Less Duplicating" machine the DI-ACRO BENDER has perhaps the greatest potential of any individual unit in the entire DI-ACRO LINE as its scope of operations covers an unlimited variety of shapes in all types of ductile materials including tubing, angle, channel, extrusions, flat stock and solid bars.

Illustrated on this page are a few examples of the wide range of parts that can be readily produced with this superbly engineered machine in either experimental or production quantities with a very minimum of set-up time required.

The duplicating possibilities of DI-ACRO BENDERS are only limited by the ingenuity of the operator and it is often amazing to learn of the intricate bends in difficult materials produced by users of these precision bending machines.

Model shops, experimental laboratories and production departments can all enjoy the advantages offered by DI-ACRO BENDERS as their low original cost can often be charged against tooling for one individual job while their precision will be appreciated during many years of useful service.

Thousands of DI-ACRO BENDERS have been shipped to the four corners of the world and wherever there is industrial activity you will find these precision tools doing an outstanding job in duplicating parts for every conceivable requirement.

In choosing a DI-ACRO BENDER, careful consideration should be given to the size selected. The smallest machine that has sufficient material and radius capacity for your requirements will usually provide the greatest production while for experimental operations the unit having sufficient capacity range to cover your largest material is generally the best choice.

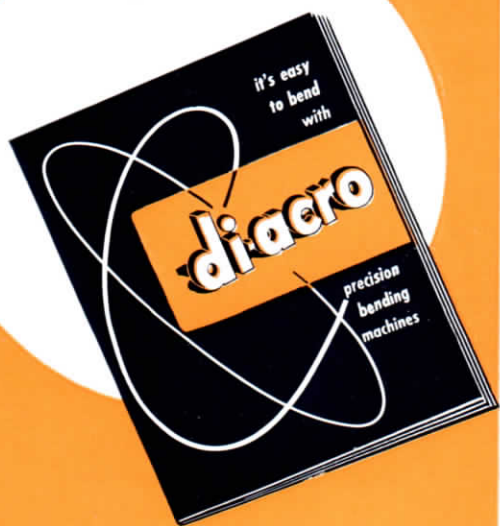
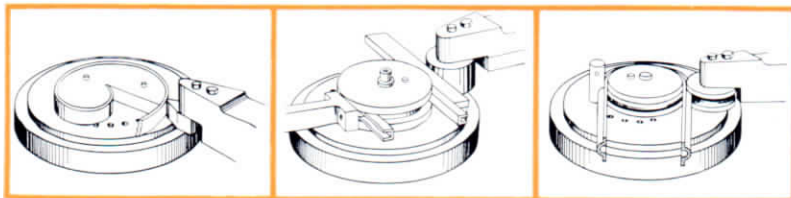
A complete line of accessories for bending various radii in tubing and most solid materials is available for all DI-ACRO BENDERS and a listing of these parts is contained in the informative bending manual offered below.

Fulltest value from DI-ACRO BENDERS is realized when they are tooled in your own plant as bending jobs arise. Knowing the desired production and tolerances required, you are in the best position to determine the type of tooling that will facilitate manufacture of the part.

"It's Easy to Bend!"... a 32 page Bending Manual — profusely illustrated — extremely informative

This instructive booklet will quickly prove itself indispensable wherever bending is being done. It contains ideas that are applicable to any rotary type bender.

The exact method of producing various types of bends in a wide range of materials is illustrated, step by step, together with valuable tooling suggestions in blueprint form.



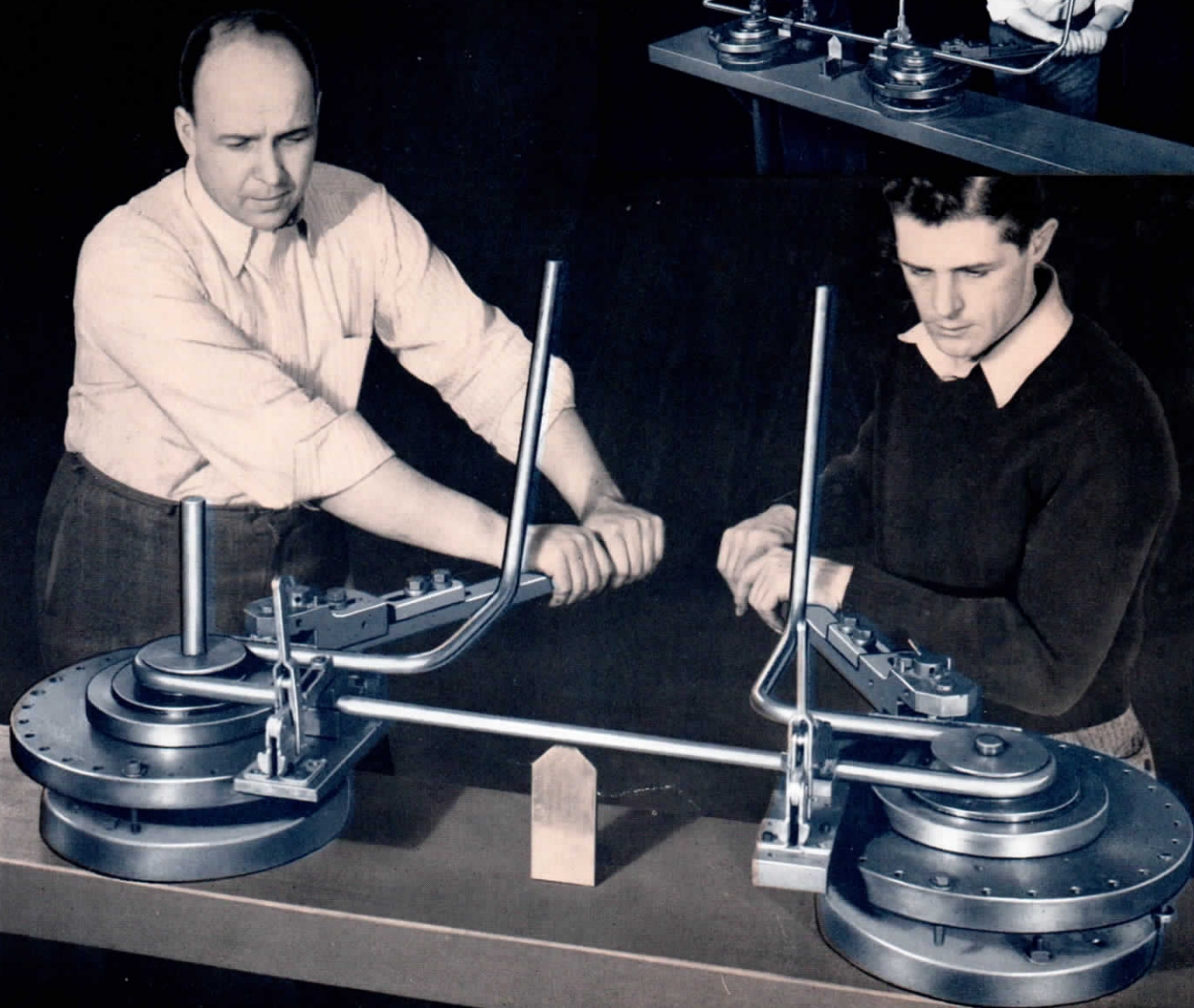
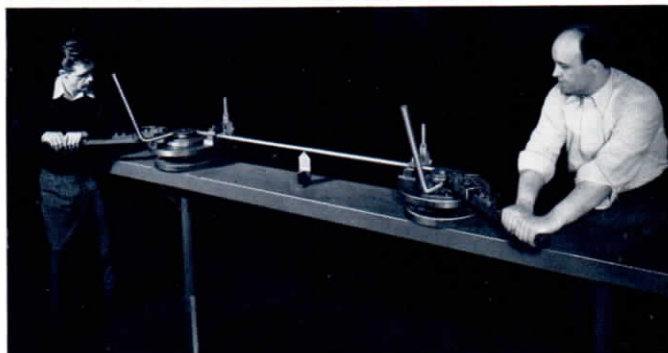
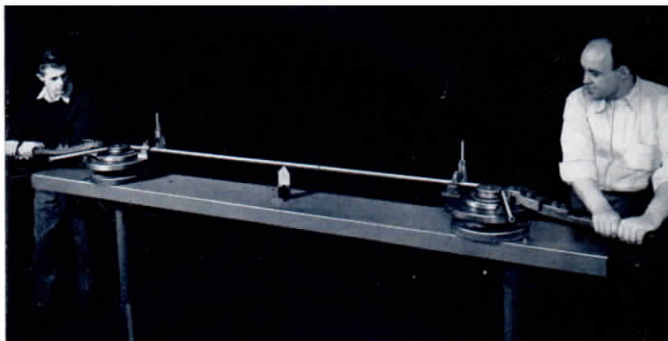


BENDING TUBULAR FORMS WITH THE DI-ACRO BENDER

The above part is typical of the bending operations possible with DI-ACRO BENDERS and the photographs at the right illustrate the sequence of operations for completing this form.

There are two unusual features about this particular operation. First of all the use of two DI-ACRO BENDERS to obtain two identical bends at one time and secondly the fact that one of the benders is located in a different position on the bench for each operation to provide the desired location between bends.

These photographs were taken at the plant of Eldon Manufacturing Company, Milwaukee, Wisconsin, who are specialists in the art of bending. From a small beginning a few years ago with 2 DI-ACRO BENDERS as their only production equipment this aggressive company has grown into a substantial organization. Today their equipment includes 19 DI-ACRO BENDERS.



BECAUSE—it's designed for versatility—manufactured with accuracy and easily tooled for production—the DI-ACRO BENDER has become today's most popular precision bending machine.

Simple, compound and reverse bends can all be formed and accurately duplicated with the DI-ACRO BENDER in tubing, angle, channel, extrusions, mouldings, strip stock, bus bars, round or square rods and other solid bars.

This multi-purpose bender can be quickly changed over from one bending operation to another, thereby providing a method of producing innumerable parts and eliminating expensive dies for many experimental and production requirements.

The bending capacity offered in the five different models covers the entire material range from 1/16" wire to a 1" round mild steel bar or equivalent with radius possibilities from zero to 12".

All five sizes of DI-ACRO BENDERS are identical in design, construction and operating characteristics with sufficient additional strength built into each successively larger unit to adequately cover its greater material and radius forming capacity.

The new DI-ACRO BENDER NO. 4 offers a direct drive for the lighter operations and a ratchet drive, that quadruples the operator's efforts, for the heavier jobs thereby providing an extremely wide operating range.

di-acro BENDER

*today's most popular precision bending
machine . . . because "it bends them all"*

TUBING - ANGLE - CHANNEL - MOULDING - EXTRUSIONS - FLAT STOCK - SOLID BARS

BENDING ACCESSORIES

The DI-ACRO BENDER can be delivered completely equipped for most forming operations in solid materials as a complete line of radius pins and collars is available for all models.

Tube forming accessories are also offered for all sizes of tubing and pipe within the capacity of DI-ACRO BENDERS.

A complete listing of all DI-ACRO BENDER accessories is given in the bender manual, "It's Easy to Bend," offered on page 6 of this catalog.

DI-ACRO BENDER STAND

A welded steel stand with two storage shelves is available for all DI-ACRO BENDERS.

Its very rugged construction allows it to withstand extreme bending pressure while the design places the bending machine at the most convenient operating height.

DI-ACRO QUIK-LOK CLAMP

The QUIK-LOK CLAMP is easily mounted on the DI-ACRO BENDER No. 2, 3 and 4 as shown at left.

This accessory is particularly valuable when bending tubing, angle, channel and extrusions as it locks the material securely and can be instantly released for removal of the part.

DI-ACRO BENDER NO. 2
MOUNTED ON DI-ACRO
BENDER STAND

DI-ACRO
QUIK-LOK CLAMP

**DI-ACRO Bender is
offered in 5 sizes**

DI-ACRO BENDER NO. 1

DI-ACRO BENDER NO. 1A

DI-ACRO BENDER NO. 2

DI-ACRO BENDER NO. 3

**DI-ACRO
BENDER NO. 4**

CONSTRUCTION FEATURES

The DI-ACRO BENDER is produced from alloy castings and cold rolled steel bars. All parts subject to wear are properly hardened and ground.

Standard equipment includes a bend locating gauge that allows each bend to be accurately duplicated, angle stop which positively determines the degree of bend and a locking pin that clamps the material securely during the bending operation.

TORRINGTON ROLLERS installed in the main bearing, as illustrated at the right, reduce friction, ease operator effort and increase bending capacity.



CUTAWAY OF MAIN BEARING

SPECIFICATIONS

DI-ACRO BENDER	No. 1	1A	No. 2	No. 3	No. 4
Weight—Net	22 lbs.	55 lbs.	130 lbs.	215 lbs.	240 lbs.
Radius Capacity	2"	6"	9"	12"	12"
Height of Std. Forming Nose	1 1/2"	3/4"	1"	1 1/2"	1 1/2"
Built-up Nose available	1"	2"	3"	4"	4"
Center Pin Hole—Diameter	3/8"	1/2"	1"	1"	1"
Operating Leverage	8"	16"	29"	40"	40"
MATERIAL CAPACITIES					
Round Mild Steel Bar	3/16"	5/16"	1/2"	5/8"	1"
Square Mild Steel Bar	1/8"	1/4"	3/8"	1/2"	3/4"
Steel Tubing—16 gauge	5/16"	1/2"	3/4"	1"	1 1/4"
Standard Iron Pipe			1/4" I.D.	1/2" I.D.	1" I.D.
Flat Steel Bar (Bent flat)	1/8" x 3/4"	3/8" x 1"	1/4" x 1 1/2"	1/4" x 2"	3/8" x 4"
Flat Steel Bar (Edgewise)	1/8" x 1/2"	1/8" x 1/2"	1/8" x 3/4"	1/8" x 1"	1/4" x 1"
Angle	1/8" x 1/2" x 1/2"	1/8" x 1/2" x 1/2"	1/8" x 3/4" x 3/4"	1/8" x 1" x 1"	3/8" x 1" x 1"
Channel	1/8" x 1/4" x 1/2"	1/8" x 1/2" x 1/2"	1/8" x 3/8" x 3/4"	1/8" x 1/2" x 1"	3/8" x 1/2" x 1"

YEARS OF BENDING EXPERIENCE—many months of designing—numerous weeks of experimenting and testing—all have combined to make the DI-ACRO HYDRA-POWER BENDER the finest universal power bending machine available—anywhere.

All of the operations possible with the manually operated DI-ACRO BENDERS illustrated on pages 4 to 7 and outlined in the new DI-ACRO BENDER MANUAL entitled "It's Easy to Bend", can also be accomplished with the DI-ACRO HYDRA-POWER BENDER.

The sturdy steel body and all other parts of the DI-ACRO HYDRA-POWER BENDER have been designed to withstand loads much heavier than they will normally be subjected to with all components made to exacting tolerances to assure continuous and lasting accuracy.

A smooth even flow of power is assured at all times by the Vickers Hydraulic System incorporated in this ver-

satile machine. The correct bending speed for all types of material is always at the instant command of the operator through a variable flow control valve which allows infinite speed adjustment.

An automatic angle control is provided which allows a series of bends of various degrees to be progressively made in a single part without removing the piece from the machine. Production quantities of identical parts can be accurately duplicated through the use of a multiple bend locating gauge with which the machine is equipped.

One of the valuable features of this universal machine is that the bending motion can be operated in either direction, thereby eliminating interference which often results when forming parts containing numerous bends.

The DI-ACRO HYDRA-POWER BENDER can be delivered completely tooled for your job or it can be easily set up in your plant as your various bending requirements arise.



HYDRA-POWER BENDER

the outstanding power bender - anywhere
modern design - production speed - universal application -
precision construction - hydraulic power - variable control

DI-ACRO HYDRA-POWER BENDER NO. 6

With Toggle Clamp and Forming Roller

The basic design of the DI-ACRO HYDRA-POWER BENDER provides a driving spindle on which either of the two different set-ups shown on page 9 can be easily mounted.

Standard tooling for tube bending is illustrated in the upper photograph and a similar arrangement is also extremely practical for angle, channel, moulding and extrusion bending operations as the toggle release of both the clamp block and forming roller speeds the feeding and unloading operation of these materials.

Tubing can be accurately formed to an inside radius as small as twice the outside diameter of the tube with a minimum of distortion without the use of inside mandrels or filler.

For smaller radius bends or thin wall tubing an inside mandrel is usually required to provide internal support at the point of bend. The DI-ACRO HYDRA-POWER BENDER can be equipped at the factory for this type of forming.

DI-ACRO HYDRA-POWER BENDER NO. 8

With Mounting Plate and Forming Nose

At the right is shown the mounting plate set-up which has been used so successfully with all manually operated DI-ACRO BENDERS.

This arrangement is ideal for a wide variety of forming requirements in most solid materials and is especially valuable for bending eye bolts as it will form both centered and off-center eyes in one operating cycle.

Radius capacity of this unit is unusually large and any radius desired can be obtained by merely placing a collar of the required size on the mounting plate. A complete assortment of standard radius accessories is available or they can readily be prepared in your own plant.

Since the mounting plate allows bending a full 360°, it is necessary to use this set-up when forming tubing, angle, channel, mouldings and extrusions in excess of the 280° angle range of the toggle clamp set-up. This can be easily accomplished through proper tooling.

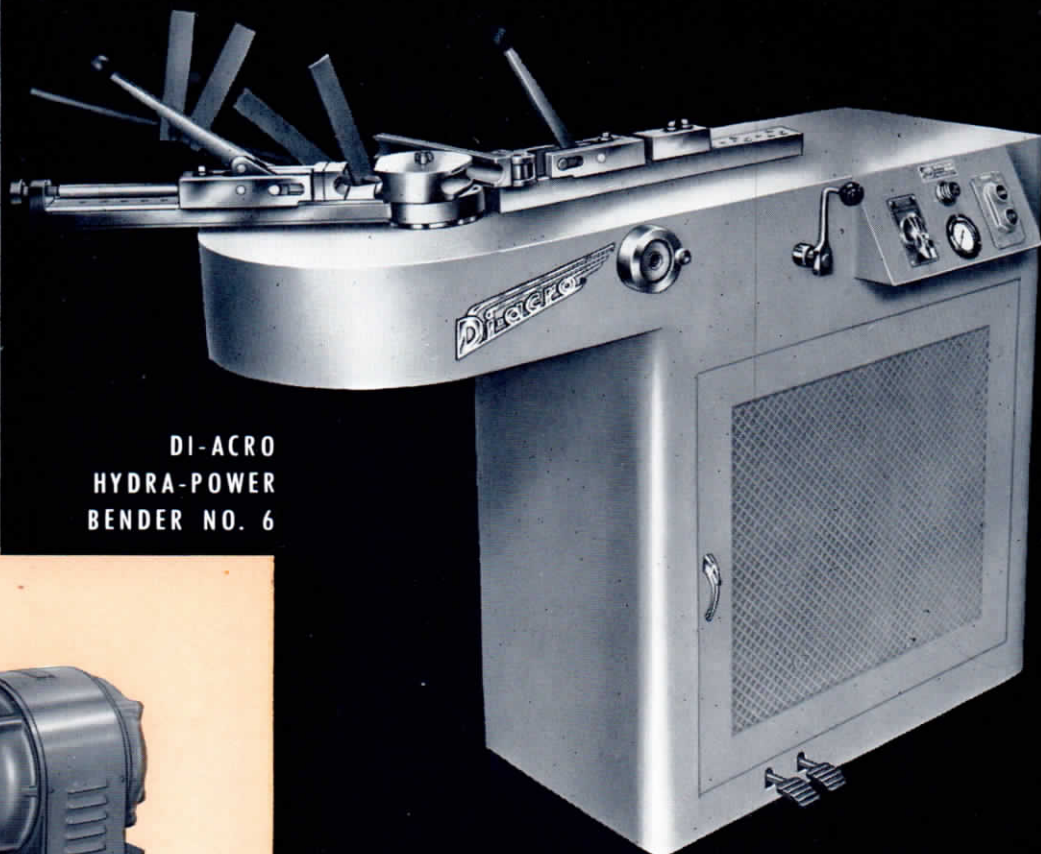
DI-ACRO HYDRA-POWER BENDER	No. 6	No. 8
Radius Capacity	9"	24"
(Can be increased)		
Maximum degree of bend	280°	360°
Hydraulic pressure	1000 P.S.I.	1000 P.S.I.
Bending Speed Range	6 RPM to	6 RPM to
(Faster speeds available)	12 RPM	12 RPM
Weight No. 6—Net 950 lbs., Crated 1150 lbs., Export 1250 lbs.		

DI-ACRO HYDRA-POWER BENDER	No. 6	No. 8
Motor 220-440 Volt A.C.		
Three Phase 60 Cycle	3 H.P.	3 H.P.
Hydraulic Cylinder—	Tomkins-	Tomkins-
3½" bore	Johnson	Johnson
Hydraulic Pump—		
Flow Control Valve	Vickers	Vickers
Floor Space	18"x54"	18"x54"
Weight No. 8—Net 1000 lbs., Crated 1200 lbs., Export 1300 lbs.		

MATERIAL CAPACITY

DI-ACRO HYDRA-POWER BENDER No. 6

Steel Tubing—16 gauge . . . 1 1/2" O.D.
Standard Iron Pipe 1 1/4" I.D.
Round Mild Steel Bar 3/4"
Square Mild Steel Bar 1/2"
Flat Steel Bar—Bent Flat . . . 3/8" x 2"
Flat Steel Bar—Edgewise . . . 3/8" x 1"
Angle 3/16" x 1" x 1"
Channel 3/16" x 1/2" x 1"



DI-ACRO
HYDRA-POWER
BENDER NO. 6



Complete hydraulic power unit.

MATERIAL CAPACITY

DI-ACRO HYDRA-POWER BENDER No. 8

Centered Eye—Round Mild Steel
Bar (One operation) 3/4"
Centered Eye—Round Mild Steel
Bar (Two operations) 1"
Square Mild Steel Bar 3/4"
Flat Steel Bar—Bent Flat . . . 3/8" x 4"
Flat Steel Bar—Edgewise . . . 3/8" x 1"
Steel Tubing—16 gauge . . . 1 1/2" O.D.
Standard Iron Pipe 1 1/4" I.D.
Angle 3/16" x 1" x 1"
Channel 3/16" x 1/2" x 1"



DI-ACRO
HYDRA-POWER
BENDER NO. 8

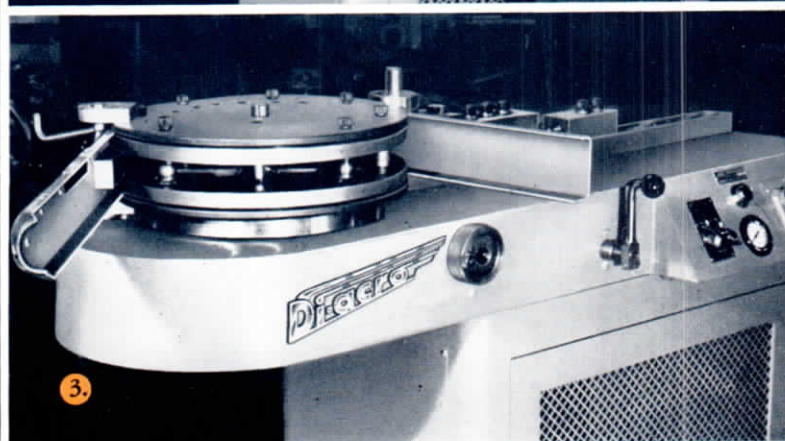
**Die-Less
Duplicating with**

**DI-ACRO
HYDRA-POWER
BENDER**

The forming of a large diameter circle in flat stock is illustrated below. This operation has proven valuable to many companies for producing brake bands and similar parts.

Below is shown a wide section of sheet metal formed into a partial circle. The ridge pressed into center of sheet retains its shape because of support provided in tooling.

DI-ACRO HYDRA-POWER BENDER No. 8 tooled for bending an 18" radius in $\frac{3}{4}$ " standard pipe.



The versatility of the DI-ACRO HYDRA-POWER BENDER is illustrated on these pages much more vividly than words can describe it.

Imagine, one bending machine capable of performing all of these operations by just simple changes in the tooling.

When you realize that these jobs are only typical of hundreds of different operations that can be performed with this unit, we believe that you too will understand why DI-ACRO is the outstanding POWER BENDER—anywhere.



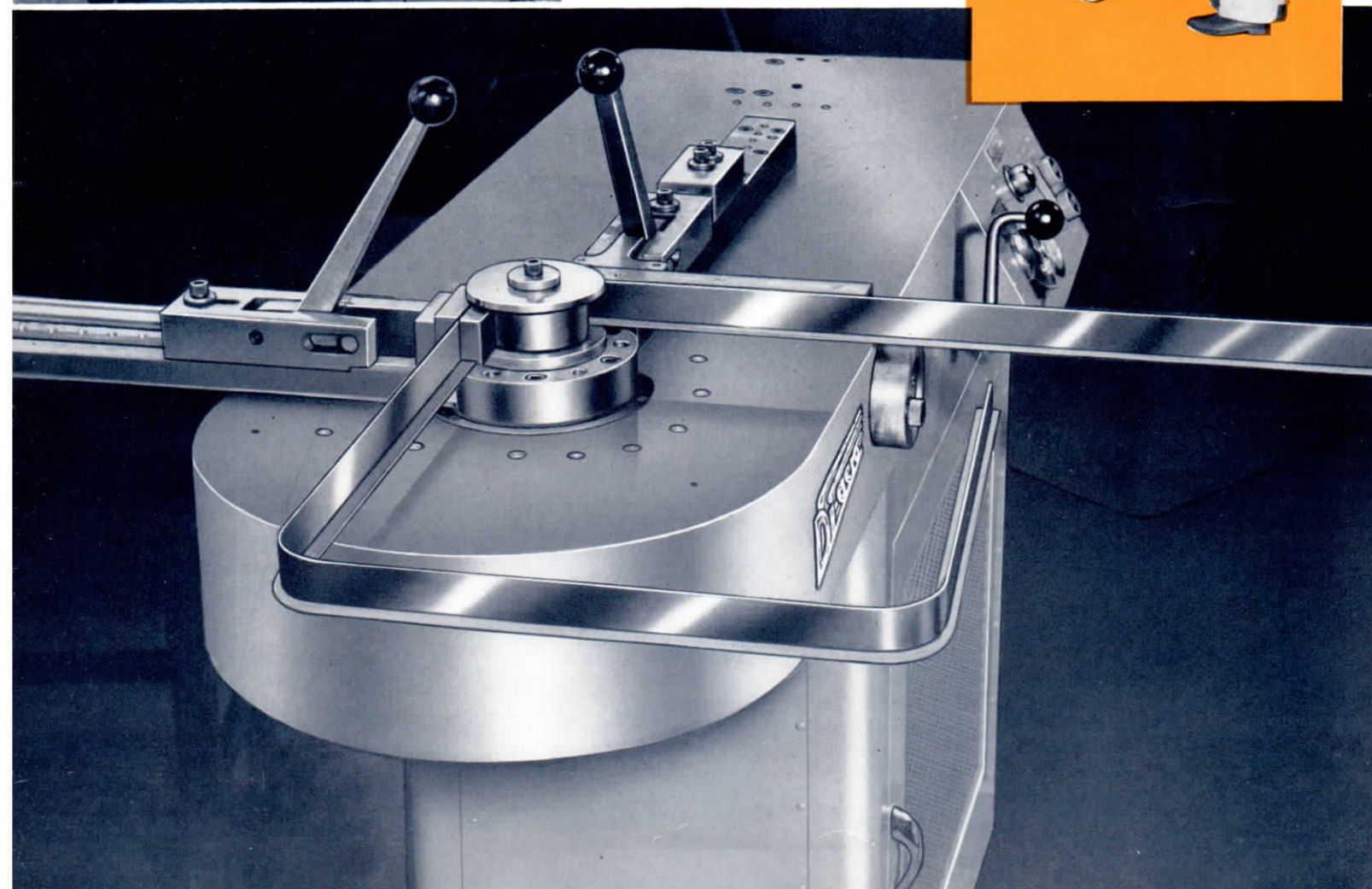
1. Production forming of a washing machine moulding.
2. Bending a wide channel section to a large radius.
3. Completed bend. Note how channel legs are confined by tooling to prevent distortion.
4. Forming an eye in flat stock for a gate hinge.
5. This time it's a moulding for a dinette table.



Forming tube
with DI-ACRO
HYDRA-POWER
BENDER NO. 6.



The photo below illustrates the bending of a stainless steel T moulding. To keep this very thin material from buckling, clearance of only .001" is allowed in tooling.



THE EVER PRESENT PROBLEM of accurately cutting bar stock to length for short runs or in production quantities can now be readily solved with the precision built DI-ACRO ROD PARTER.

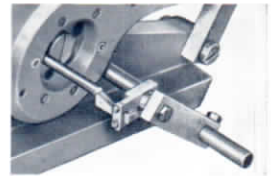
Exceptional ease of operation in cutting bars as large as $\frac{3}{8}$ " in diameter is made possible by a powerful leverage arrangement that greatly multiplies the operators efforts.

The "parting-off" operation of DI-ACRO ROD PARTERS is a shearing-breaking action that allows most materials to be cut without burr and a minimum distortion of the rod. The degree of squareness of the cut is largely determined by the breaking quality of the material. After parting, the rod can easily be inserted in a hole of its same diameter and the end can be threaded or riveted without further processing.

High cutting speeds can be obtained with the DI-ACRO ROD PARTER when using the Ejectomatic Gauge. Its ejecting action allows the rod to be parted as rapidly as it can be fed into the machine. The Ejectomatic Gauge is standard equipment.

The scope of operations of the DI-ACRO ROD PARTER ranges from the small diameter rods required in many precision products to the heavy bars used in the manufacture of agricultural and road machinery.

EJECTOMATIC GAUGE . . . Supplied as standard equipment, this gauge allows the three separate operations of gauging, parting and ejecting to be automatically performed in a single working cycle.



DI-ACRO
ROD PARTER
NO. 1

di-acro ROD PARTER accurately "parts-off" bar stock



DI-ACRO
ROD PARTER
NO. 2

CONSTRUCTION FEATURES

The cutting head of the DI-ACRO ROD PARTER No. 1 is provided with eleven holes graduated in size from $\frac{1}{16}$ " to $\frac{3}{8}$ " diameter in steps of $\frac{1}{32}$ ". There are ten holes from $\frac{1}{16}$ " to $\frac{5}{8}$ " diameter graduated by $\frac{1}{16}$ " in the DI-ACRO ROD PARTER NO. 2. This makes possible the choice of a cutting hole that will closely fit the material to be cut.

These holes are only .003" to .004" oversize to provide the best possible cut on all standard cold finish bars. Special sizes of round holes for cutting mild steel and other over-size rods can be supplied. Write for quotation.

DI-ACRO ROD PARTERS for cutting square, rectangular, hexagon and other shaped bars are also available.

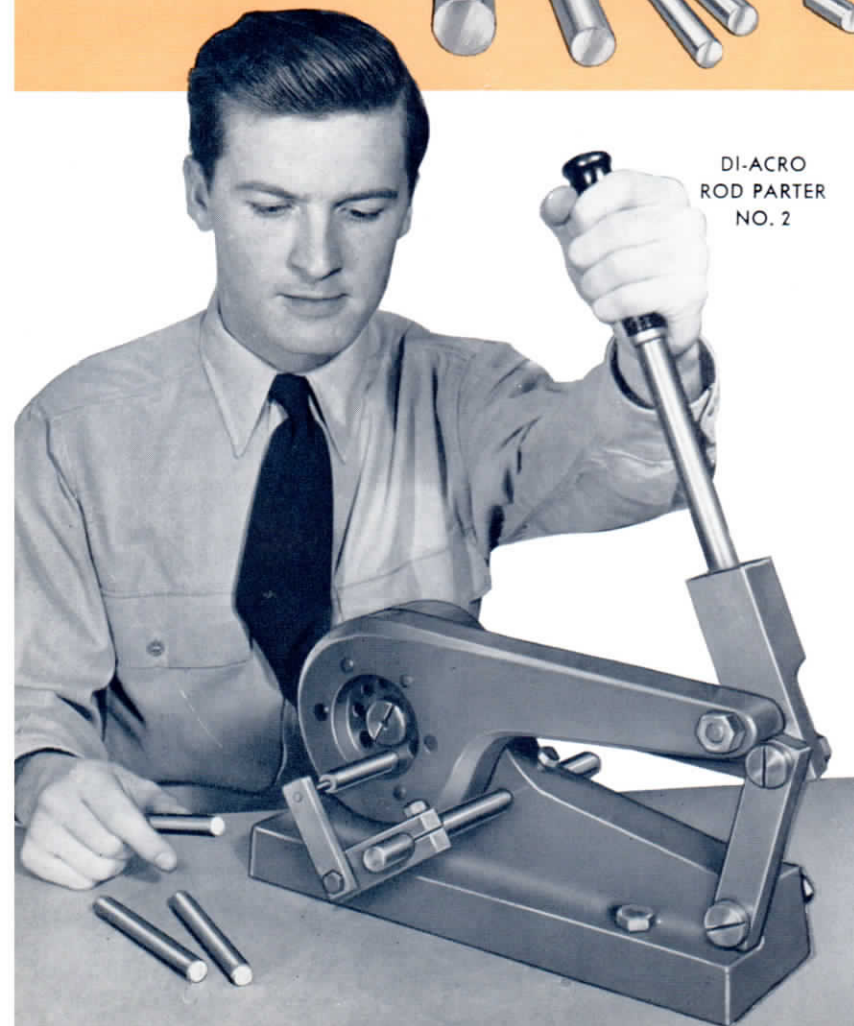
Cutting heads of alloy tool steel, properly hardened and precision ground, assure a high degree of accuracy. Heads are reversible offering double service and can be removed for resharpening and quickly replaced.

Two operating handles are provided to efficiently cover the complete material range of the DI-ACRO ROD PARTER.

Both sizes of the DI-ACRO ROD PARTER are equipped with an Ejectomatic Gauge.

SPECIFICATIONS AND CAPACITIES

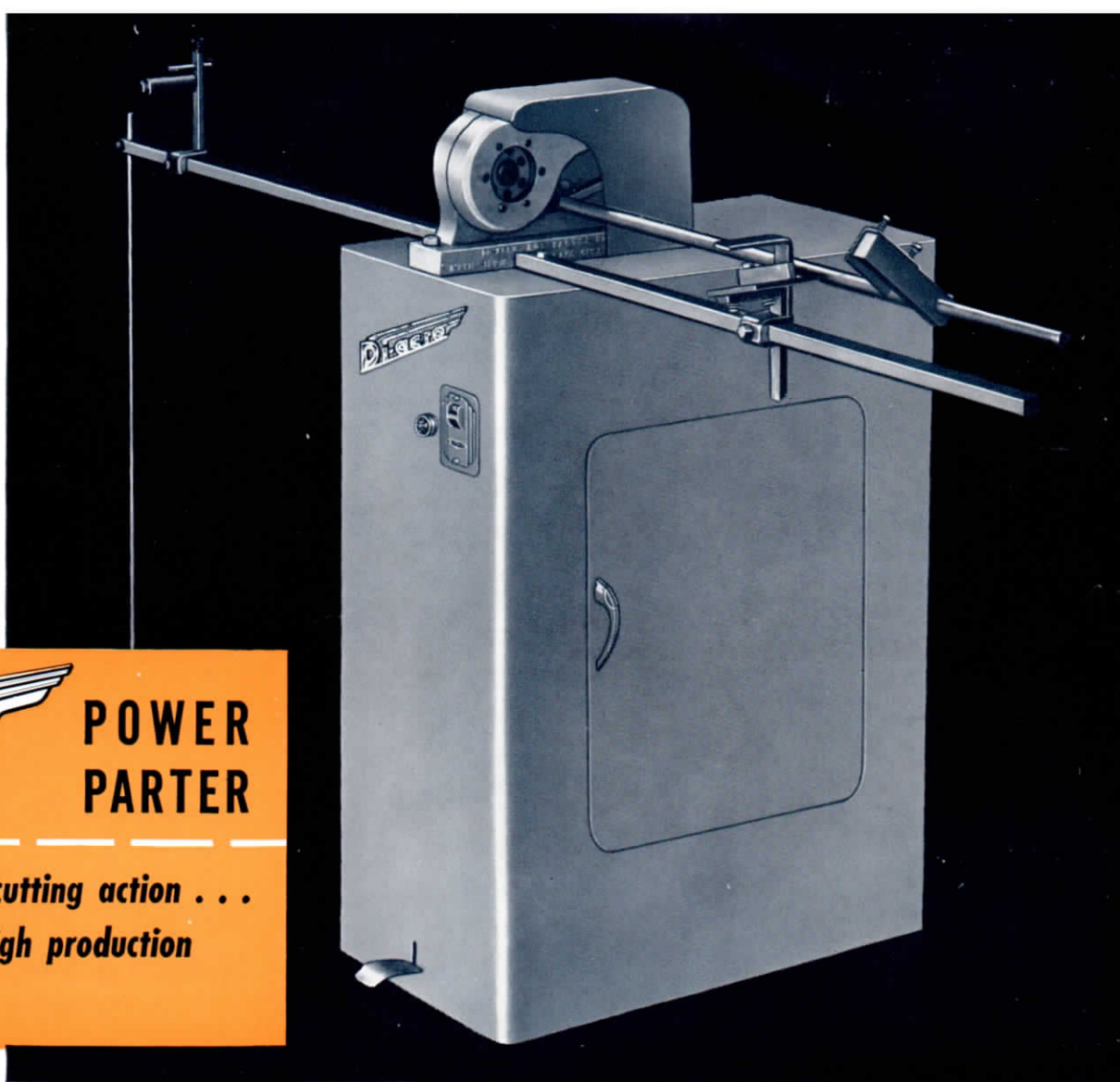
DI-ACRO ROD PARTER	No. 1	No. 2
Maximum capacity, round steel bar . .	$\frac{3}{8}$ "	$\frac{3}{8}$ "
Cutting Head Thickness	$\frac{3}{8}$ "	1"
Weight, net	25 lbs.	60 lbs.





POWER PARTER

**instantaneous cutting action . . .
extremely high production**



ALL FEATURES of manually operated DI-ACRO ROD PARTER have been incorporated in the new DI-ACRO POWER ROD PARTER. Motor driven flywheel and foot actuated clutch provide instantaneous cutting action. Production rate is limited only by the speed with which the operator can feed stock into the machine and trip the foot control. Standard equipment includes a Material Length Gauge which allows rapid ejection of cut parts.

SPEED-MATIC GAUGE is an accessory item for use when an extremely high rate of production must be maintained. No need to use the foot control—operator concentrates on feeding stock through the cutting heads against the Speed-matic Gauge. This contact is relayed to a solenoid which trips off the cutting action and also allows the cut part to be ejected. Depending upon the length of cut, it is possible to make over nine thousand cuts per hour with a Speed-matic Gauge.

SPECIFICATIONS AND CAPACITIES

DI-ACRO POWER PARTER

Maximum Material Capacity—steel bar.....	5/8"
Cutting Head Thickness	1"
Weight of Flywheel	85 lbs.
Strokes Per Minute	180
Standard Motor (Optional 110-220 Volt A.C. single phase, 220-440 Volt A.C. three phase)	1/2 H.P.
Motor Speed	1750 R.P.M.
Operating Height	40"
Floor Space	17" x 28"
Weight—Net	450 lbs.

CONSTRUCTION FEATURES

The cutting head of the DI-ACRO POWER PARTER is provided with ten holes graduated in size from 1/16" to 5/8" diameter in steps of 1/16", thereby allowing the choice of a hole that will closely fit the rods to be cut.

Specifications covering hole tolerances and special cutting heads are identical to data listed for the DI-ACRO ROD PARTER on page 12.

Cutting heads of heavy alloy tool steel, properly hardened and precision ground, are reversible offering double service and can be easily removed for resharpening and quickly replaced.



ADJUSTABLE STOCK STAND—
An Accessory which facilitates
the feeding of material.

IT IS NO LONGER NECESSARY to cut small precision blanks to size on a foot or power shear designed for heavier or cruder operations as the DI-ACRO SHEAR assures a smooth clean cut free from rough edges or burrs in all parts of this type.

The cutting speed possible with this precision machine often rivals that of large power shears making it ideal for production operations in all shearable materials including plastics, fibre, mica, leather, rubber, aluminum, copper, cobalt steel, chrome molybdenum, leaded brass and stainless steel.

Because of its effortless action, the DI-ACRO SHEAR is ideal for operation by women and its precision construction provides perfect shearing in the thinnest of sheet materials to 16 gauge steel.

Experimental laboratories and model shops have found the DI-ACRO SHEAR of especial value for accurate cutting of the wide variety of blanks they require in limited quan-

ties and then too the compactness of the various models of this shear make them ideal for bench mounting where they are always available for immediate use.

All DI-ACRO SHEARS are equipped with alloy tool steel blades, properly hardened and precision ground, that provide unlimited service when cutting steel and other non-abrasive materials.

High-carbon, high-chrome blades are also available for all models and are especially recommended when cutting stainless, monel, high silicon and high alloy sheets.

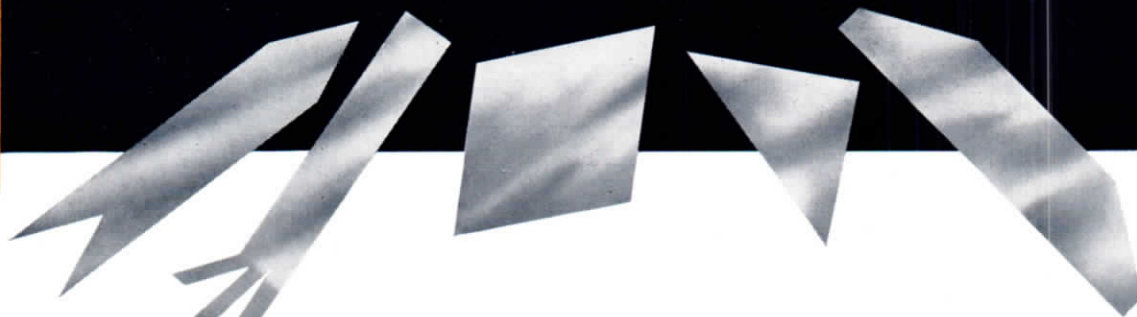
The four sizes of DI-ACRO SHEARS available are all identical in construction and operating characteristics with sufficient additional strength built into each successively larger unit to more than adequately cover its greater shearing width capacity.

Slitting and notching operations can also be performed with DI-ACRO SHEARS by merely adjusting the stops which provide positive control of the shearing action.

di-acro

SHEAR

*effortless operation - smooth clean cuts
in thinnest of materials to 16 gauge steel*



SPRING CHARGED HOLD-DOWN BAR

A new spring charged material hold-down bar is now available as an accessory for the two largest DI-ACRO SHEARS as illustrated on the shear table in the photograph at top of page 15.

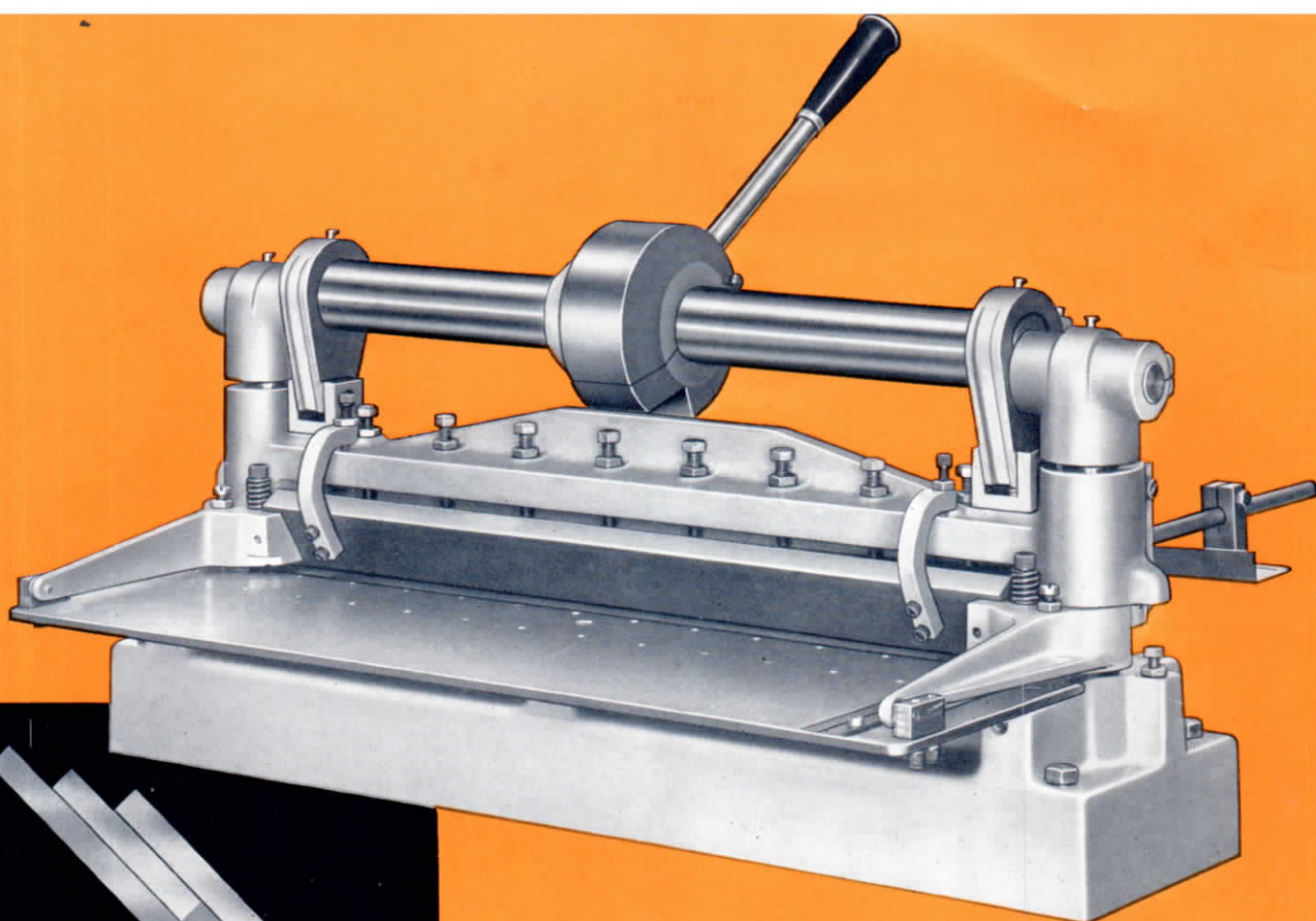
Pressure springs on this hold-down bar are always in compression so the moment that the operating handle is moved forward the bar is released and positively clamps the material before the shearing action begins.

As the handle is returned to its starting position it lifts the hold-down bar at the top of the stroke thereby requiring practically no effort on the part of the operator.

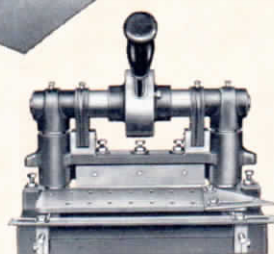
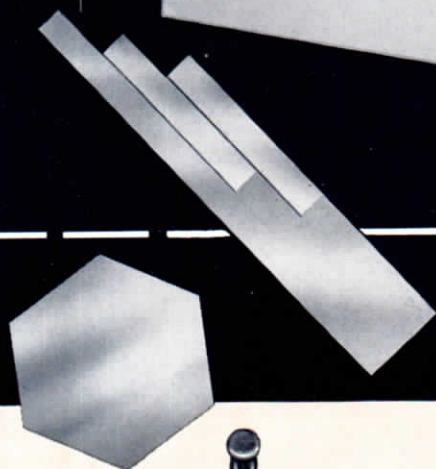
Although most materials can be satisfactorily cut on DI-ACRO SHEARS without a spring charged hold-down, this new accessory does eliminate slippage in the heavier materials and is recommended whenever extreme precision is required.

The DI-ACRO HOLD-DOWN BAR is available as extra equipment for the DI-ACRO SHEAR No. 3 and No. 4 and can also be supplied for mounting on these models now in use.

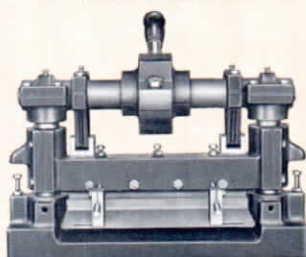




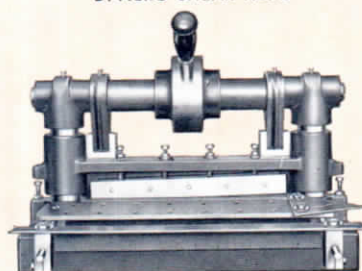
DI-ACRO SHEAR NO. 4



DI-ACRO SHEAR No. 1



DI-ACRO SHEAR No. 2



DI-ACRO SHEAR No. 3

CONSTRUCTION FEATURES

DI-ACRO SHEARS are produced from alloy castings and cold rolled steel bars with cutting blades made from Stentor tool steel, properly hardened and precision ground.

All four edges of the No. 3 and No. 4 model shear blades can be used for shearing thereby offering quadruple service between sharpenings. The blades of No. 1 and No. 2 model shears have two cutting edges. All DI-ACRO shear blades can easily be resharpened on a surface grinder.

A material length gauge supplied can be mounted in front of the shear for accurate trimming of parts or in back for accurate sizing of stock. An additional rear gauge is provided which can be adjusted inward to the very edge of the lower blade allowing strips of less than .025" in width to be accurately sheared.

Adjustable stops provide positive control of the shearing action for slitting and notching operations.

Protracting gauge for both square and angular cuts can be readily mounted in any position on the shear table as numerous holes are provided for that purpose.

Standard equipment includes a short operating handle for production speed in the lighter operations and a longer handle to reduce operator effort in the heavier materials.

SPECIFICATIONS AND CAPACITIES

DI-ACRO SHEAR	No. 1	No. 2	No. 3	No. 4
Maximum Shearing Width	6"	9"	12"	24"
Material Capacity—Sheet Steel	16 gauge	16 gauge	16 gauge	16 gauge
Net Weight	35 lbs.	80 lbs.	135 lbs.	260 lbs.

A NEW CONCEPT IN HIGH SPEED PRODUCTION SHEARING is offered by the DI-ACRO VARI-O-SPEED POWER-SHEAR as its advanced design and precision construction provides full capacity continuous shearing within its entire speed range of 30 to 200 R.P.M.

The cutting cycle of this precision shear can be quickly adjusted to the very fastest speed at which the operator can feed the material for any given shearing operation, thereby providing maximum operator productivity as the necessity of engaging the clutch for each cutting stroke has been entirely eliminated.

Speed of the shearing stroke for both continuous and single cycle operation is positively controlled with the handle conveniently located at the operator's left.

A non-repeating positive safety clutch, which allows "single stroke" operation with the shear blade moving

at any desired speed within the entire range of the unit, is also incorporated in this precision machine.

The cutting range of the DI-ACRO VARI-O-SPEED POWER-SHEAR extends from the lightest of materials in plastics, fibre, mica, leather and rubber to heavy gauges of aluminum, cobalt steel, chrome molybdenum, leaded brass, stainless steel and many spring tempered materials. In all these materials, a clean cut free from rough edges or burr is assured because of the sustained accuracy built into this sturdy precision machine.

Every metal working plant will find the DI-ACRO POWER-SHEAR a valuable addition to its equipment, regardless of the larger capacity shears now being used, because of its compact size and the greater speed and accuracy possible in production shearing of the smaller parts and pieces with this extremely flexible machine.

DI-ACRO

POWERSHEAR

variable speed - continuous operation

a new concept in production shearing



METALS



RUBBER



MICA



FIBRE



PLASTIC



LEATHER



SCREEN MESH

CONSTRUCTION FEATURES

Both the design and operating convenience of the DI-ACRO POWERSHEAR is enhanced by a substantial knee hole in the front of the cabinet which provides comfort for the operator and allows close observation of the work.

A spring charged material hold-down bar is standard equipment on all models of DI-ACRO POWERSHEARS and this bar also acts as a guide for exact positioning of the work when shearing to a scribed line.

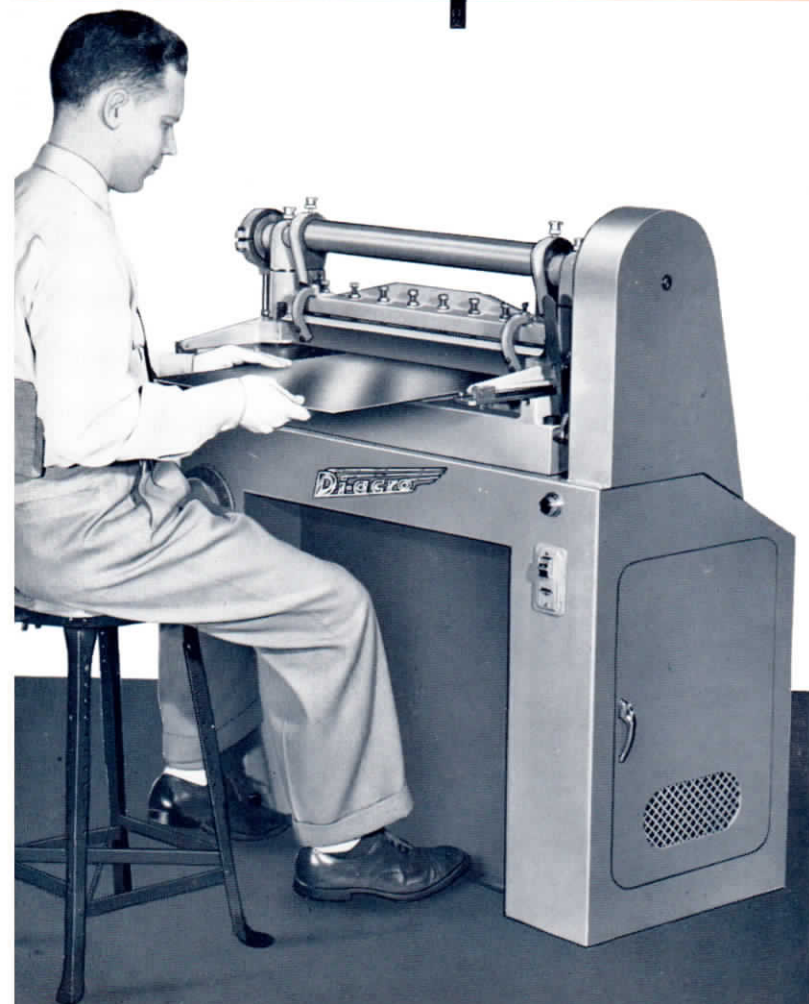
DI-ACRO POWERSHEARS are equipped with Stentor tool steel blades, properly hardened and precision ground, each with four cutting edges thereby offering quadruple service before sharpening.

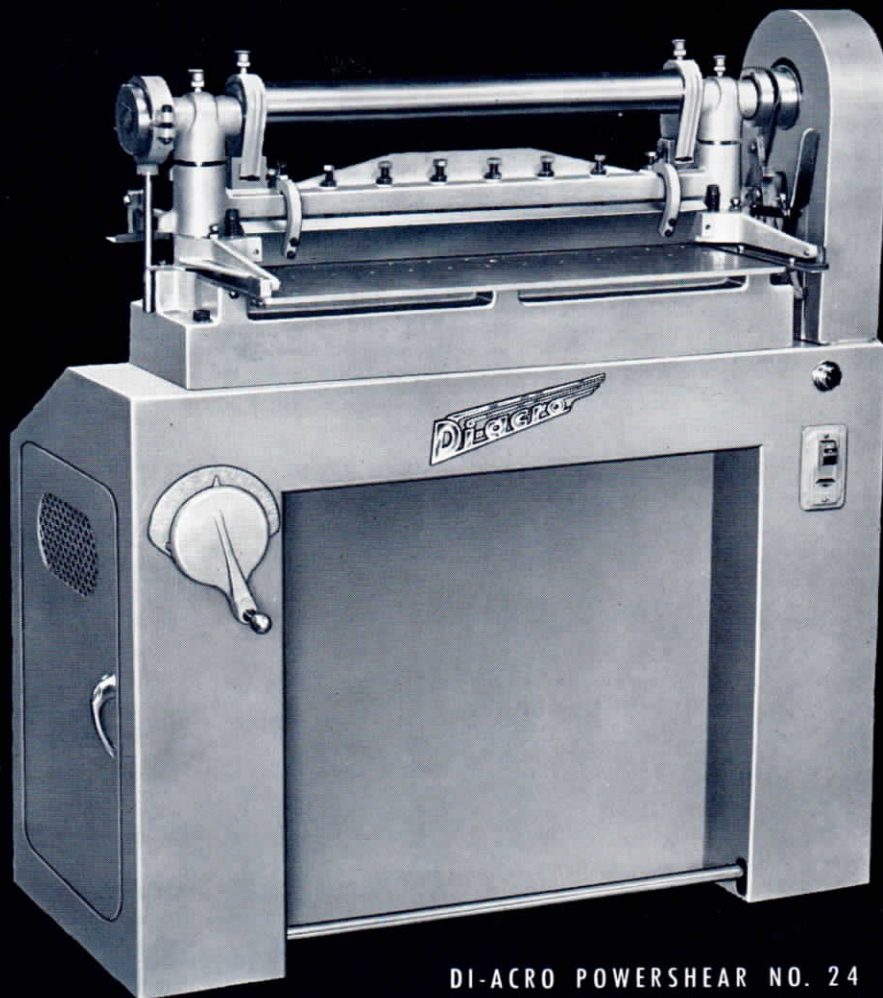
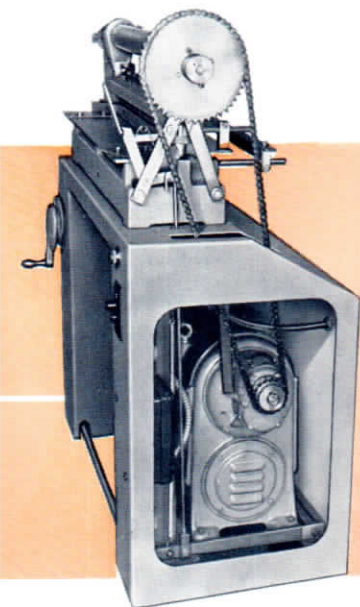
High-carbon, high-chrome blades are also available for all models and are especially recommended when cutting stainless steel, monel, high silicon and high alloy sheets.

The material length gauges provided can be quickly mounted either in front of the Shear for accurate trimming of parts or in back for precision sizing of stock. An additional rear gauge is provided that can be adjusted inward to the very edge of the lower blade allowing extremely narrow strips to be accurately sheared.

A rugged welded steel cabinet, which is finished in an attractive light machine tool grey color, houses the motor and controls employed for the operation of this precision shearing machine.

The design of the cabinet incorporates a gravity chute for delivery of all sheared materials into a receptacle.





DI-ACRO POWERSHEAR NO. 24

DI-ACRO VARI-O-SPEED POWERSHEAR

The DI-ACRO VARI-O-SPEED POWERSHEAR is equipped with a U.S. Varidrive motor and a direct drive between the motor and the shear provides a range of continuous cutting speeds from 30 to 200 R.P.M. which can be quickly adjusted to exactly fit the shearing operation.

A silent roller chain drive transmits a continuous flow of power from the motor providing full capacity shearing at speeds as slow as 30 R.P.M.

The non-repeating positive action safety clutch allows "single stroke" shearing at any blade speed desired within the range of the unit.

DI-ACRO STANDARD POWERSHEAR

The DI-ACRO STANDARD POWERSHEAR NO. 12 is equipped with a triple V-belt flywheel drive which has only one speed set to provide maximum capacity. The No. 24 model is powered by a gear motor through a roller chain drive identical to that of the DI-ACRO VARI-O-SPEED POWERSHEAR.

Each shearing cycle is instantly obtained by engaging the non-repeating safety clutch through either the hand lever or foot pedal. This "single stroke" drive is very practical where a wide range of blade speeds or continuous shearing action is not desired.

SPECIFICATION AND CAPACITIES

DI-ACRO POWERSHEAR	VARI-O-SPEED		STANDARD	
	No. 12	No. 24	No. 12	No. 24
Maximum Shearing Width	12"	24"	12"	24"
Maximum Capacity—Sheet Steel	16 gauge	16 gauge	16 gauge	16 gauge
Strokes Per Minute (Either Range Optional)	30 to 150 40 to 200	30 to 150 40 to 200	180	90
Motor—Optional { 110-220 Volt A.C. single phase or 220-440 Volt A.C. three phase	1/2 H.P.*	1/2 H.P.*	1/2 H.P.	3/4 H.P.**
Motor Speed	1750 R.P.M.	1750 R.P.M.	1750 R.P.M.	1750 R.P.M.
Operating Height	34"	34"	34"	34"
Floor Space	18 1/2" x 30"	18 1/2" x 40"	18 1/2" x 30"	18 1/2" x 40"
Net Weight	475 lbs.	675 lbs.	510 lbs.	710 lbs.

* U. S. Varidrive Motor

** U. S. Syncrogear Motor

IT IS NOT BY MERE CHANCE that the DI-ACRO PUNCH PRESS is daily gaining in favor in model shops, research laboratories and production departments since the excellence of its design that combines power, precision and capacity is proving more and more valuable to its thousands of users everywhere.

This multi-purpose punch will not only perforate holes in a wide range of materials but can also be effectively used as a precision press for an unlimited variety of blanking, forming, drawing and embossing operations.

The powerful action of this precision machine is obtained through a roller cam which produces sufficient pressure to perforate holes as large as 4" in diameter in 16 gauge steel with a minimum of operator effort.

Precision gauging of the material for exacting requirements is assured by the adjustable back and side gauges which can be quickly set and positively locked.

A triangular ram, hardened and precision ground, positively controls the position of the punch head throughout the entire stroke assuring perfect alignment and continuous accuracy.

In addition to the wide range of readily interchangeable punches available for this press, as listed below, special punches and dies can be supplied to your specifications.

The DI-ACRO PUNCH PRESS is an extremely valuable unit in the DI-ACRO Line as it will perform either primary or secondary operations on parts being processed through the DI-ACRO System of Die-Less Duplicating.

di-acro **PUNCH PRESS**

*power . . . precision . . . capacity . . . design
combine to make DI-ACRO the perfect choice*

PUNCH • BLANK • FORM • DRAW • EMBOSS

DI-ACRO PUNCH PRESS
MOUNTED ON STAND



CONSTRUCTION FEATURES

The DI-ACRO PUNCH PRESS is produced from alloy castings and cold rolled steel bars with all parts that are subject to wear properly hardened and ground.

A turret stripper with four stations is supplied that can be rapidly positioned for stripping the material from any size punch within its capacity.

Adjustable side and back gauges incorporated in the DI-ACRO PUNCH PRESS allow precision gauging for exacting duplicating operations.

Perfect alignment of the punch head is assured at all times by a triangular shaped ram which is hardened and precision ground. A roller cam provides tremendous pressure at the point of impact.

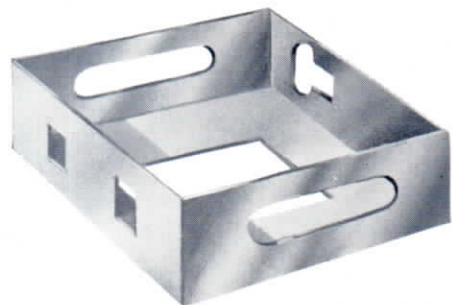
All DI-ACRO PUNCHES larger than 1/2" have a 1" diameter shank. A punch holder is provided for the smaller punches which have a 1/2" diameter shank and one die holder is also included with each machine.

Standard equipment includes a short operating handle for production speed in the lighter operations and a longer handle to reduce effort in heavier materials.

DI-ACRO PUNCH PRESS STAND

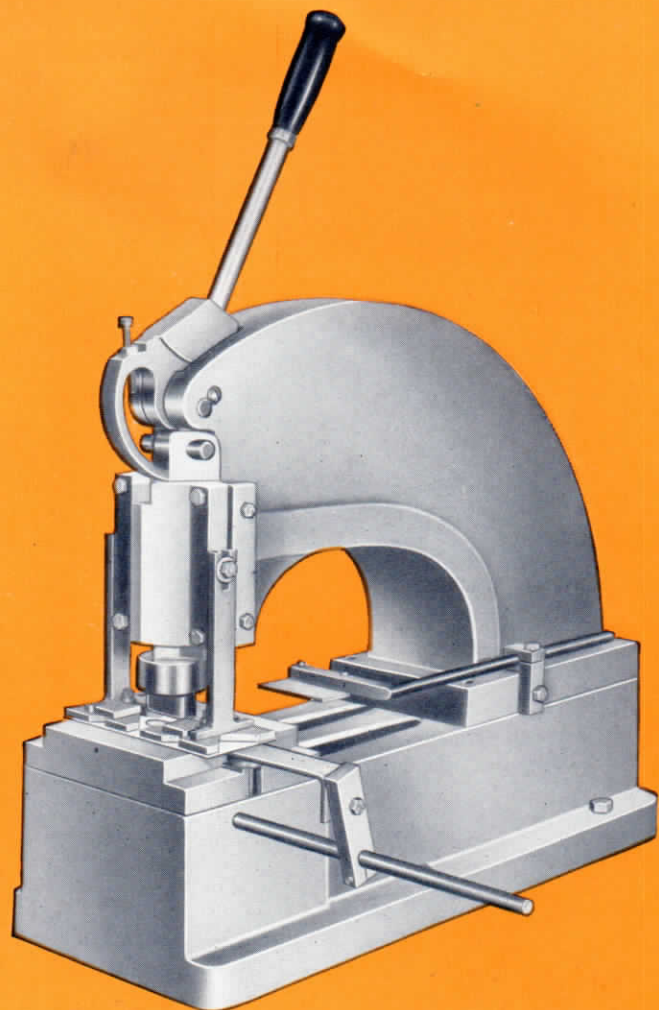
For most efficient operation it is recommended that the DI-ACRO PUNCH PRESS be mounted on the stand designed for that purpose as illustrated at the left.

This rugged stand is produced from heavy steel plate and specially formed sections all welded into an extremely sturdy unit. Provision is made in the top plate to allow the waste slugs to drop onto the top shelf.

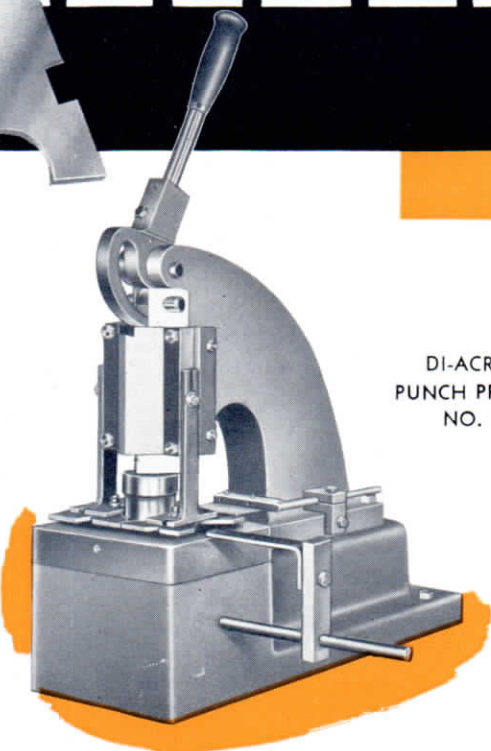


*production examples of
the DI-ACRO punch press*

DI-ACRO
PUNCH PRESS
NO. 2



DI-ACRO
PUNCH PRESS
NO. 1



SPECIFICATIONS AND CAPACITIES

DI-ACRO PUNCH PRESS	NO. 1	NO. 2
Depth of Throat	6 1/4"	12 1/4"
Net Weight	170 lbs.	340 lbs.
Below specifications same for both models.		
Material Capacity—4" Diameter hole in 16 gauge sheet steel		
(.062") 1/4" hole in 3/16" steel plate.		
Rated Capacity	4 Tons	
Height of Throat	3"	
Stroke of Ram	5/8"	
Hole in Ram	1" Diameter	
Dimensions of Bed	6" x 7 1/2"	
Slug-Waste Hole	4 1/4" x 5 3/4"	

DI-ACRO PUNCH PRESS ACCESSORIES

A complete range of punches and dies is offered for use with the DI-ACRO PUNCH PRESS as listed below.

These are available in six different clearances to provide a punch and die set of the exact dimensions required for a perfect punching operation.

In addition to these standard stock sizes, in between sizes can be supplied as well as special dies for any requirement within capacity of the DI-ACRO PUNCH PRESS.

STANDARD SIZES—DI-ACRO PUNCHES AND DIES
(complete quotation sheet available)

Round	1/16" to 1" 1" to 2" 2" to 4"	in graduations of 1/64" in graduations of 1/32" in graduations of 1/16"
Square	1/8" to 2"	in graduations of 1/16"
Oval	1/8"W x 1/2"L to 1"W x 2"L	in graduation of 1/8"W and 1/2"L
Rectangular	1/8"W x 1/2"L to 1"W x 2"L	in graduation of 1/8"W and 1/2"L



NOTCHING OPERATIONS IN SHEET MATERIALS need no longer be a haphazard operation with a tin snips or an expensive die set up on a punch press as the DI-ACRO NOTCHER now provides a means of rapidly and accurately producing one notch or ten thousand.

All shearable materials can be readily cut with the manual DI-ACRO NOTCHER and its ease of operation makes possible production rates which often rival that of power driven equipment.

The powerful action of this precision machine is obtained through a roller cam which produces sufficient pressure to cut a 90 degree notch as large as 6" x 6" in 16 gauge steel in one operation with a minimum of operator effort.

Adjustable gauges, which are a standard part of this

unit, can be readily set to locate a notch of any desired dimension either at the corner or in any position along the edge of a sheet.

Notches both greater and smaller than 90 degrees can be obtained in two operations and many straight shearing operations can be performed with this double-purpose machine.

Lifetime precision built into the DI-ACRO NOTCHER, which includes a hardened and ground triangular ram, assures a clean cut free from rough edges or burrs in the complete range of materials within its capacity.

The DI-ACRO NOTCHER is especially valuable as a companion unit for DI-ACRO BRAKES as it will notch sheet materials for box making and many other sheet metal forming operations.

di-acro **NOTCHER**

no expensive dies . . . no punch press set-up . . .

adjust the gauges and you're in production!

CONSTRUCTION FEATURES

The DI-ACRO NOTCHER is a complete unit which includes notching blades for 90 degree cuts as large as 6" x 6".

The top blade is a triangular block of tool steel that is bolted to an alloy casting which in turn is mounted onto the ram. The two lower blades adjust to provide proper clearance for a clean cut in the thinnest of materials.

All blades are produced from alloy tool steel which is properly hardened and precision ground. They are reversible for double duty and can be easily resharpened on a surface grinder.

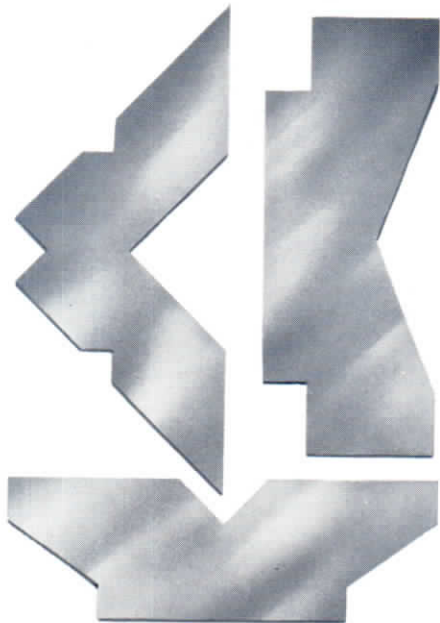
Adjustable gauges—for accurately locating a notch either at a corner or in any position along the edge of a sheet—are mounted on a 12" by 18" work table. This table provides a large material support area and makes for easy work handling and positioning.

A triangular shaped ram, hardened and precision ground, controls the position of the cutting head providing perfect alignment at all times.

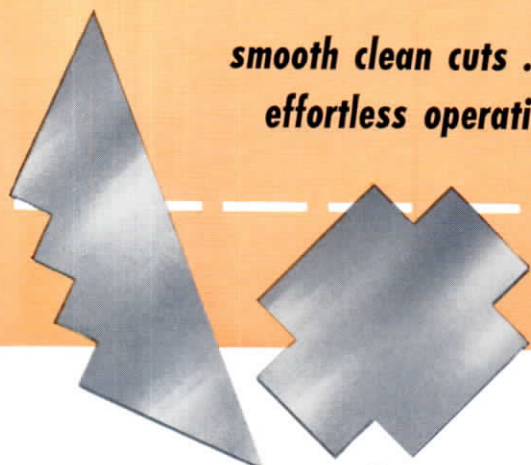
Extreme durability and continuous accuracy is assured by the alloy cast iron base and body.

Standard equipment includes a short operating handle for production speed in the lighter operations and a longer handle to reduce effort in heavier materials.



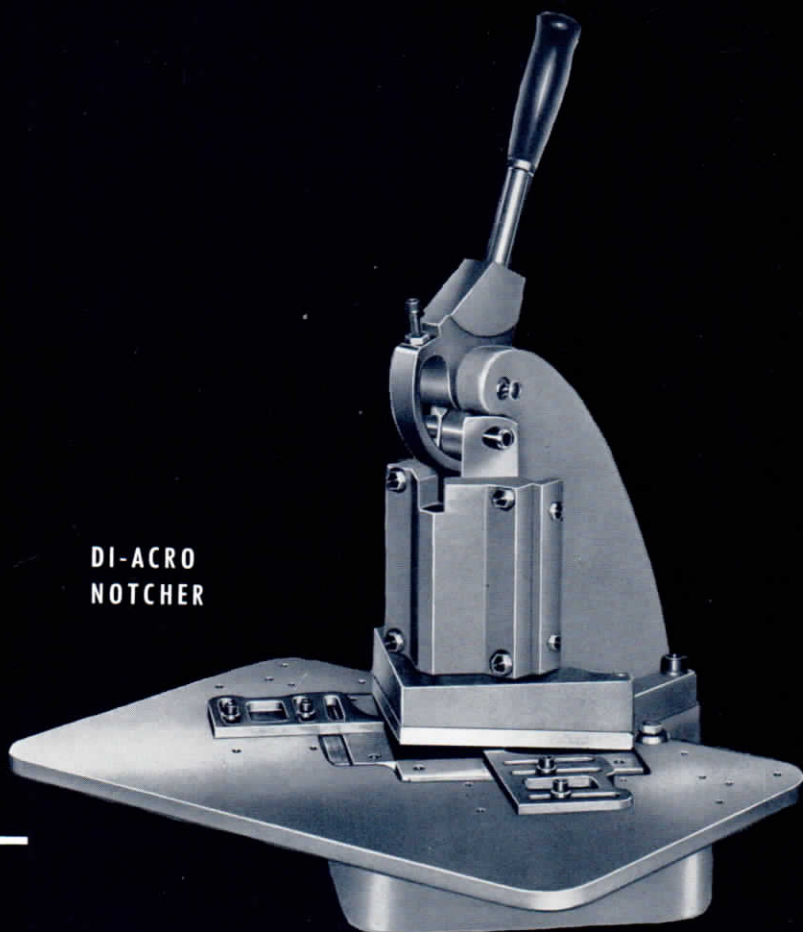


*smooth clean cuts . . .
effortless operation*



DI-ACRO NOTCHER
MOUNTED ON STAND

DI-ACRO NOTCHER



DI-ACRO NOTCHER STAND

For most efficient operation it is recommended that the DI-ACRO NOTCHER be mounted on the stand designed for that purpose and illustrated at the left.

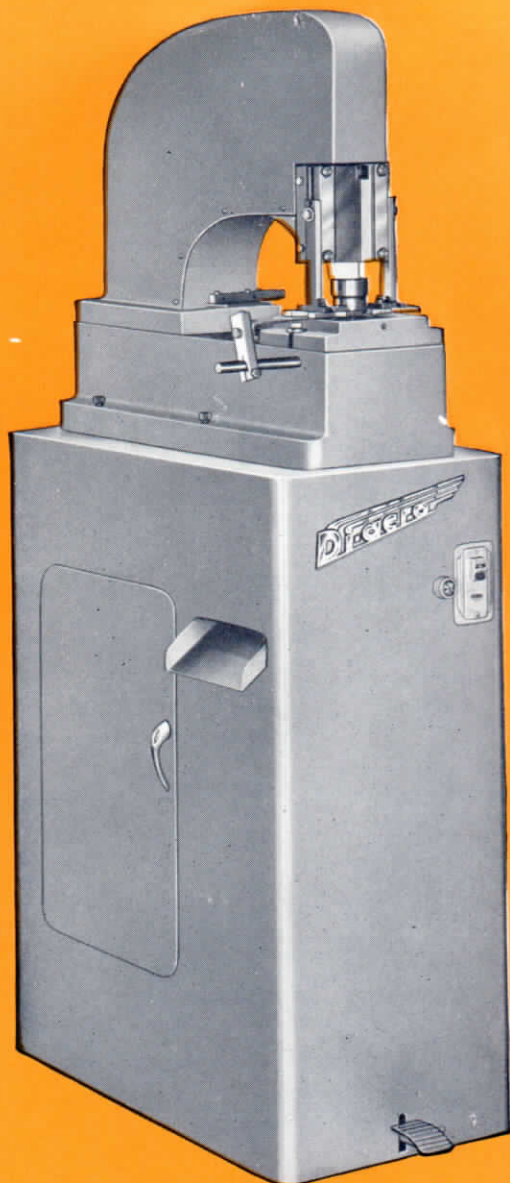
This rugged stand is produced from steel plate and specially formed sections all welded into an extremely sturdy unit. Its 36" height is ideal for the average operator allowing the highest possible output.

Provision is made in the top plate to allow the waste slugs to drop onto the top shelf.

It is finished in a light machine tool grey to harmonize with the DI-ACRO NOTCHER.

SPECIFICATIONS AND CAPACITIES

DI-ACRO NOTCHER	
Maximum Material Capacity—Sheet Steel	16 gauge
Maximum 90 degree notch (one operation)	6" x 6"
Rated Capacity	4 tons
Stroke of Ram	5/8"
Net Weight	125 lbs.
DI-ACRO NOTCHER STAND	
Net Weight	90 lbs.



DI-ACRO POWER PUNCH PRESS

The numerous advantages offered by the distinctive design and precision construction of the DI-ACRO POWER PUNCH PRESS merit your careful consideration.

First of all the deep throat of this precision punch press makes it ideal for many operations that cannot be performed on most bench type presses because of their shallow throat.

With the flywheel, clutch, motor and other operating parts all compactly housed in a sturdy welded steel cabinet, danger from exposed moving parts is completely eliminated and greater visibility of the work is provided for the operator.

It is of real value to know that the complete line of interchangeable punches and dies, listed on page 21, is available for the DI-ACRO POWER PUNCH PRESS as the assortment offered covers a wide range of operations.

The many exclusive features of the DI-ACRO POWER PUNCH PRESS, which include a turret stripper, built-in side and back gauges and a hardened triangular ram, all combine to reduce set-up time and provide efficient and high speed production.

DI-ACRO POWER PUNCH PRESS

ORDERING SUGGESTIONS

If the DI-ACRO POWER PUNCH PRESS is also desired for manual operation it is important that you so state when ordering as an operating handle and a roller cam will then be supplied for this purpose. These parts are interchangeable for both the DI-ACRO PUNCH PRESS and DI-ACRO NOTCHER.

SPECIFICATIONS AND CAPACITIES

DI-ACRO POWER PUNCH PRESS	No. 1	No. 2
Depth of Throat	6 1/4"	12 1/4"
Rated Capacity	5 Tons	5 Tons
Weight of Flywheel	85 lbs.	85 lbs.
Strokes Per Minute	180	180
Standard Motor (Optional)	1750 RPM	1750 RPM
110-220 Volt AC Single Phase {	1/2 HP	1/2 HP
220-440 Volt AC Three Phase }		
Operating Height	42"	44"
Floor Space	17"x28"	17"x28"
Net Weight	540 lbs.	715 lbs.

For additional specifications see pages 18-19

it's different -- it's practical
one DI-ACRO POWER UNIT drives
both of these "production twins"

With an investment in only a single DI-ACRO POWER UNIT, it is possible to have both a power operated punch press and notcher as either of these machines can be easily and quickly mounted on the power cabinet.

The DI-ACRO POWER UNIT is an exactly designed product developed especially to provide a means of powering both the DI-ACRO PUNCH PRESS and DI-ACRO NOTCHER.

This unit is a complete power drive consisting of a flywheel, clutch, motor and electrical controls all compactly housed in a rugged welded steel cabinet. Its power is transmitted through a vertical motion to a power arm that can be easily connected to either the DI-ACRO PUNCH PRESS or DI-ACRO NOTCHER.

DI-ACRO POWER NOTCHER

The DI-ACRO POWER NOTCHER will prove indispensable in production plants now performing notching operations through the use of special dies and heavy presses because of the saving it affords in set-up time alone.

With its capacity of 6" x 6" notches in 16 gauge sheet steel, the DI-ACRO POWER NOTCHER releases a heavy press for other operations and also eliminates the cost of expensive dies for this specialized operation.

As the notching blades are an integral part of this precision machine, it can be quickly changed over from one notching job to another by merely resetting the gauges.

Precision construction of the DI-ACRO POWER NOTCHER includes a triangular ram, hardened and ground, which provides positive control of the shearing blades thereby assuring a clean cut in all shearable materials.

The DI-ACRO POWER NOTCHER is a complete notching machine ready to operate without loss of set-up time. With the flywheel, clutch, motor and other operating parts all compactly housed in a sturdy welded steel cabinet, danger from these moving parts is eliminated and greater visibility is provided for the operator.



Both of these "production twins" are basically the same as the manual punch press and notcher illustrated on pages 18 to 21 and can be readily mounted on the DI-ACRO POWER UNIT as illustrated above.

When not in use on the DI-ACRO POWER UNIT, each machine can be used for manual operation in experimental work or short production runs.

In the event only a power punch press or a power notcher is required at the present time, it is valuable to know that the other "production twin" is available whenever the need arises and can then be readily installed on the DI-ACRO POWER UNIT.

The perfect combination of practical engineering, modern design and precision construction incorporated in the manually operated DI-ACRO PUNCH PRESS and DI-ACRO NOTCHER, proves especially valuable when these machines are employed for high speed power production.

Additional features of the DI-ACRO POWER UNIT include a three point safety clutch which provides single stroke operation by engagement of a foot lever and a material chute built into the cabinet for delivery of slugs and blanked parts.



ORDERING SUGGESTIONS

If the DI-ACRO POWER NOTCHER is also desired for manual operation, it is important that you so state when ordering as an operating handle and a roller cam will then be supplied for this purpose. These parts are interchangeable for both the DI-ACRO NOTCHER and DI-ACRO PUNCH PRESS.

SPECIFICATIONS AND CAPACITIES

DI-ACRO POWER NOTCHER

Maximum 90 Degree Notch	6" x 6"
Rated Capacity	5 tons
Weight of Flywheel	85 lbs.
Strokes Per Minute	180
Standard Motor (Optional)	1750 R.P.M.
110-220 Volt AC Single Phase {	1/2 H.P.
220-440 Volt AC Three Phase }	
Operating Height	40"
Floor Space	17" x 28"
Net Weight	490 lbs.

For additional specifications see pages 20-21

DI-ACRO PRECISION has lifted the sheet metal forming brake from its usual routine in the tin shop or maintenance department to a position of importance in almost every metal working plant.

The multitude of duplicating operations that can be performed with a machine of this type in both experimental and production quantities has only been realized during the past few years when DI-ACRO BRAKES have been available to industry in a variety of sizes to exactly fit each individual requirement.

The versatility and extreme precision built into DI-ACRO BRAKES allows them to replace dies for innumerable forming operations and also perform the usual functions of both a brake and a bar folder on a production basis.

Model shops, experimental laboratories and production departments can all enjoy the advantages offered by DI-ACRO BRAKES as their low original cost can often be

charged against tooling for one individual job while their precision will be appreciated during many years of useful service.

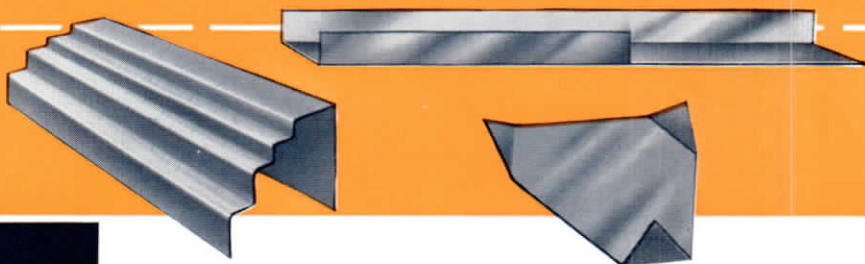
All four sizes of DI-ACRO BRAKES are identical in construction and operating characteristics with sufficient additional strength built into each successively larger unit to adequately cover its greater forming capacity.

Numerous accessories available for DI-ACRO BRAKES greatly increase their wide working range and the practical design of these precision machines makes possible many unusual operations that can be performed by making simple changes to their contact surfaces.

DI-ACRO BRAKES can be quickly adjusted for each operation whether it be to produce a few intricate pieces for experimental work or long production runs of precision parts which might otherwise be produced by the use of presses and expensive dies.

di-acro STANDARD BRAKE

*experimental laboratories . . . production departments . . .
model shops . . . can all PROFIT from this multi-purpose brake*



CONSTRUCTION FEATURES

The DI-ACRO STANDARD BRAKE is produced from alloy castings and cold rolled steel bars with all parts that are subject to wear properly hardened and precision ground. Torrington Roller Bearings provide ease of operation.

A powerful clamp securely locks the material during the forming operation assuring a sharp bend and quickly releases the part for removal.

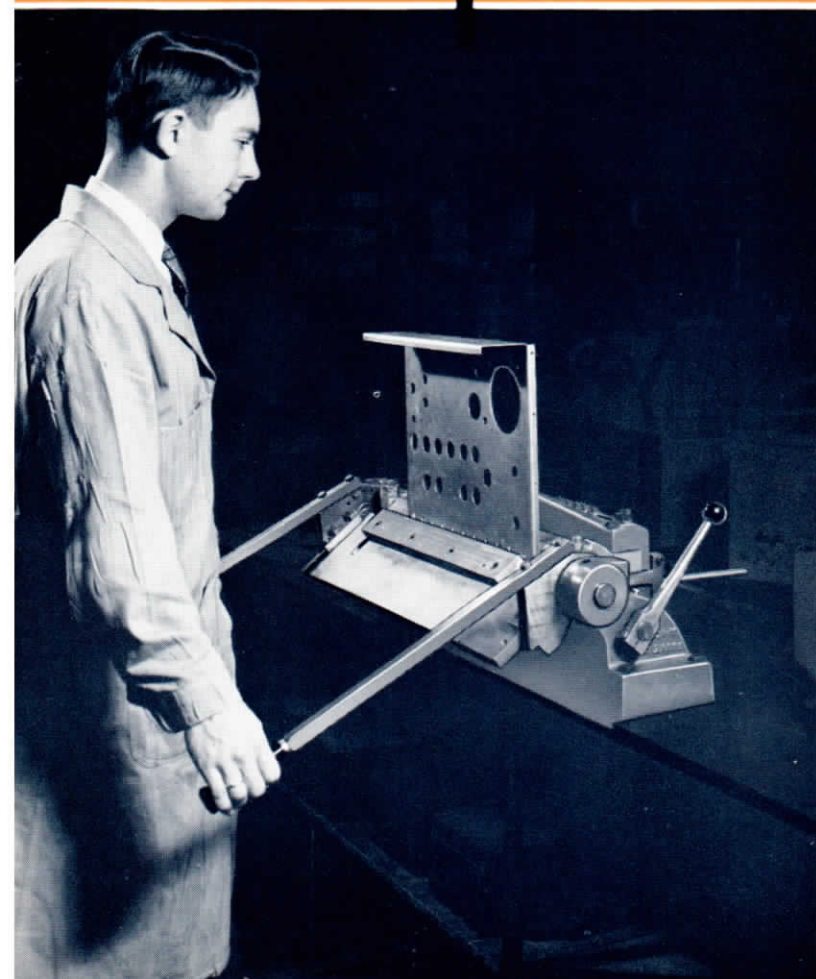
Easily adjustable angle degree stops positively control angularity and the material gauge accurately positions the bend assuring perfect duplication in all parts formed.

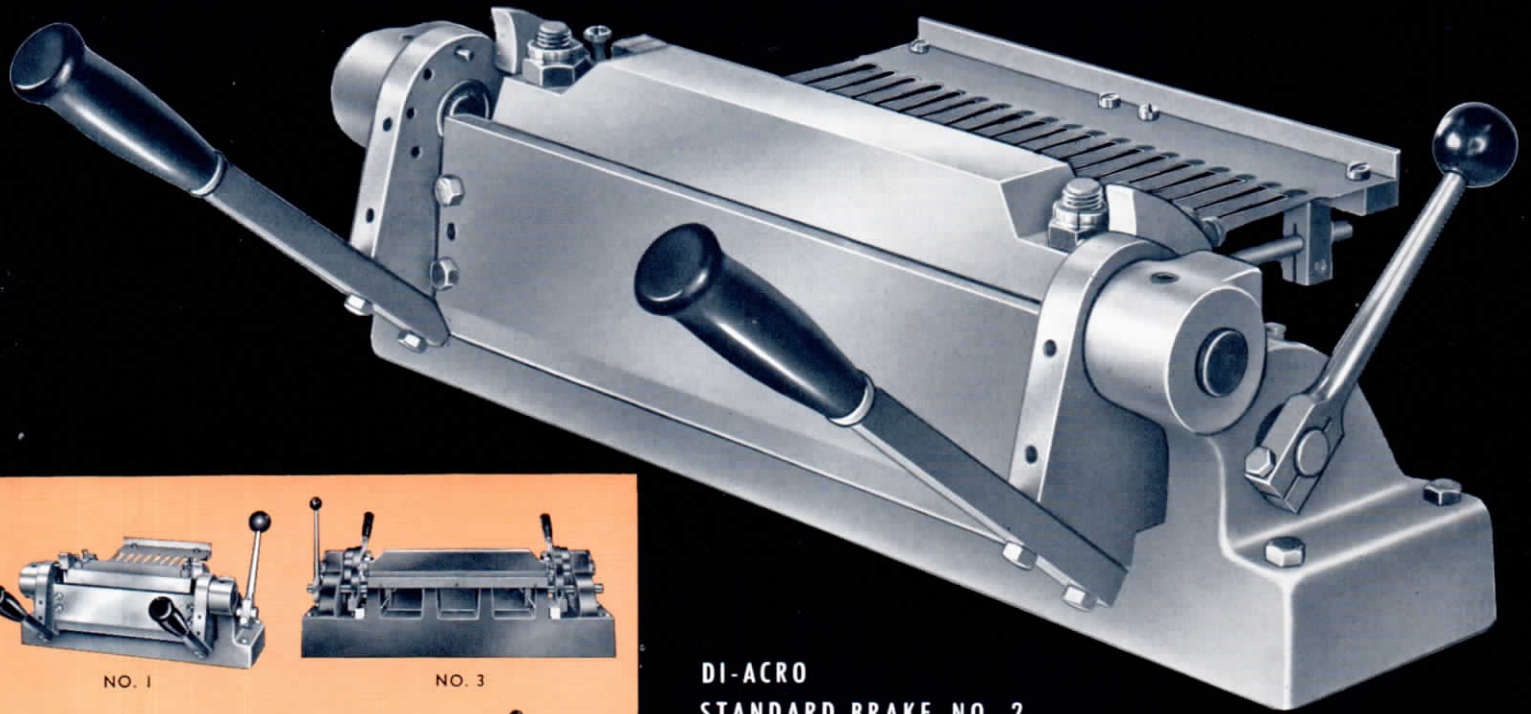
The reversible folding blade is provided with a wide edge for ordinary forming operations and a narrow edge for producing extremely close reverse bends.

Two different handle positions allow operator choice for convenience and greater production.

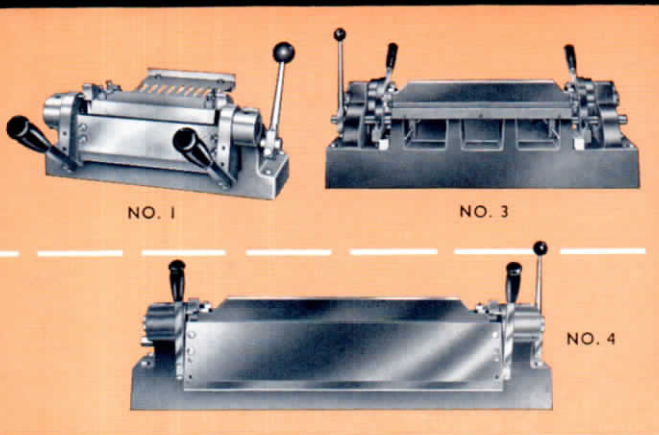
SPECIFICATIONS AND CAPACITIES

DI-ACRO BRAKE with Standard Gauge	NO. 1	NO. 2	NO. 3	NO. 4
Maximum Forming Width	6"	12"	18"	24"
Material Capacity —Sheet Steel	16 gauge	16 gauge	16 gauge	16 gauge
Maximum bend— Standard Bar	125°	125°	125°	125°
Maximum bend— Acute Angle Bar	150°	150°	150°	150°
Net weight	50 lbs.	100 lbs.	195 lbs.	275 lbs.





DI-ACRO
STANDARD BRAKE NO. 2



DI-ACRO BRAKE . . . ALSO A BAR FOLDER

Operations which require the forming of sharp angles, locks, seams and hems usually made with a bar folder can be successfully performed with all DI-ACRO BRAKES.

The photographs below show how a single hem or complete fold can be obtained in two operations by using an acute angle bar with the DI-ACRO BRAKE.

First an acute angle is formed and then positioned between the top forming bar and the folding blade. The fold is then completed as illustrated.

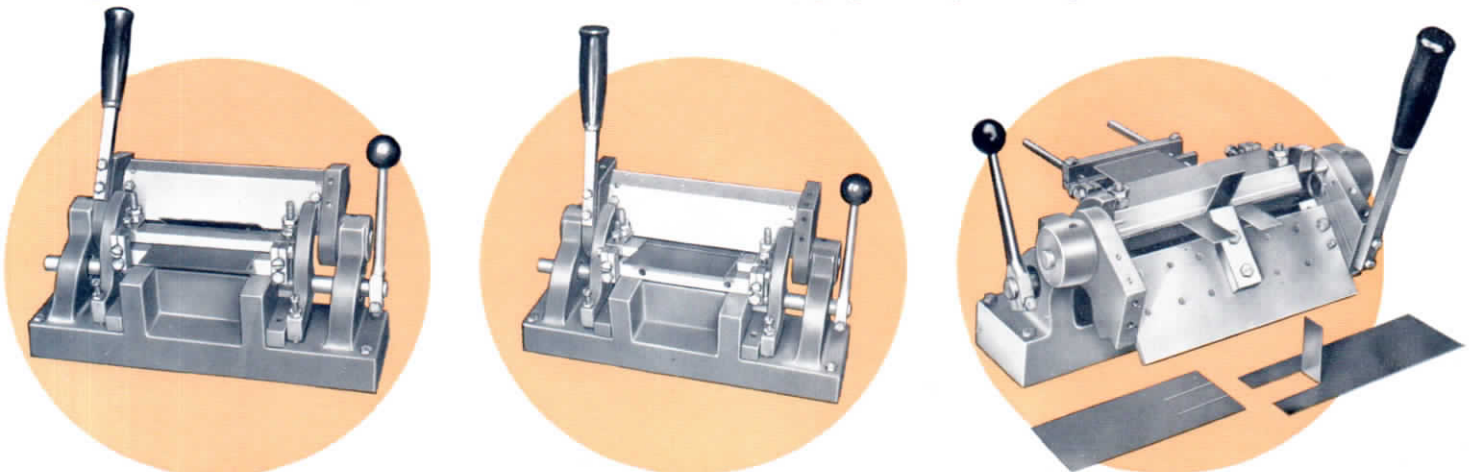
A variation of this method also allows the forming of an open hem and a wire edge.

BENDING BLOCKS ALLOW TAB FORMING

The extreme versatility of DI-ACRO BRAKES is graphically illustrated below. Here the center section of a part has been formed to a right angle without disturbing the flat material on either side.

A block mounting bar is available for all DI-ACRO BRAKES and the numerous tapped holes provided allow one or a series of bending blocks to be mounted for production of special parts.

This bar can be equipped with the proper size bending blocks at the factory from your specifications or they can be easily prepared in your own plant.

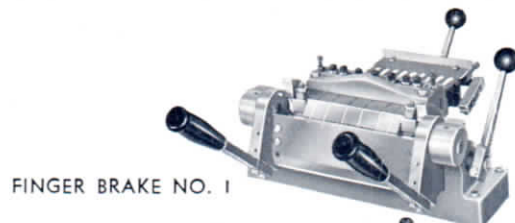


DIE-LESS DUPLICATING UNLIMITED is now a reality with this four-in-one precision brake as the complete line of accessories available give it an extremely wide operating range in a great variety of materials.

All of the features of the DI-ACRO STANDARD BRAKE described on pages 24 and 25 are incorporated in the DI-ACRO FINGER BRAKE and in addition this precision machine is equipped with fingers that allow it to be quickly set up for box forming and many other specialized operations.

These precision fingers are graduated in size so that when used in combinations they cover the entire box forming range from 1/2" to the maximum width of each model in steps of 1/8".

DI-ACRO BOX FINGERS are properly hardened, precision ground and accurately mounted against a machined surface in a sturdy alloy casting.



FINGER BRAKE NO. 1



FINGER BRAKE NO. 3



FINGER BRAKE NO. 4

di-acro FINGER BRAKE

*die-less duplicating unlimited — with this four-in-one brake!
it's a box and pan brake . . . bar folder . . . open end brake .*



A FOUR-IN-ONE BRAKE

The DI-ACRO FINGER BRAKE is equipped with a complete set of box fingers and will efficiently perform all of the functions of a box and pan brake.

By removing these fingers from their mounting bar and installing an open end finger in their place, as illustrated on page 27, operations of an open end brake can be readily performed.

It is a simple matter to remove the complete finger mount bar and replace it with an acute angle bar, thereby converting the finger brake into a bar folder, as described and illustrated on page 25.

Standard brake operations require a rugged forming bar and this part is also available and can be quickly mounted in place of the finger mount bar.

CONSTRUCTION FEATURES

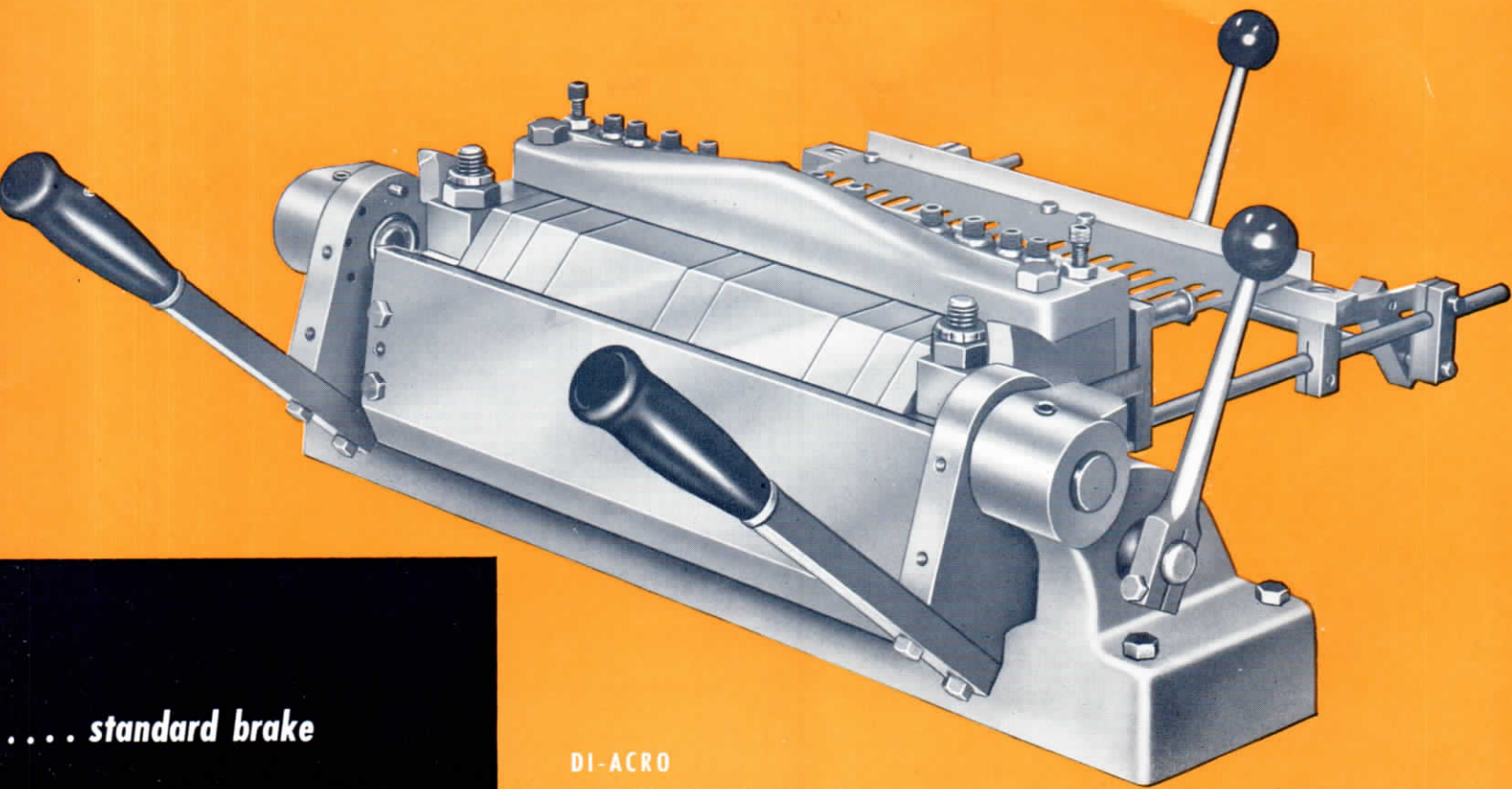
The DI-ACRO FINGER BRAKE is produced from alloy castings and cold rolled steel bars with all parts subject to wear properly hardened and precision ground. Torrington Roller Bearings provide ease of operation.

A powerful clamp securely locks material during the forming operation and easily adjustable angle degree stops accurately control angularity, assuring perfect duplication in all parts formed.

The ADJUSTOMATIC GAUGE, which is standard equipment on all DI-ACRO FINGER BRAKES, as illustrated at the right, can be quickly set by merely moving the adjusting lever. A spring action gauge located directly below the fingers allows the accurate gauging of bends within 1/8" of the material edge.

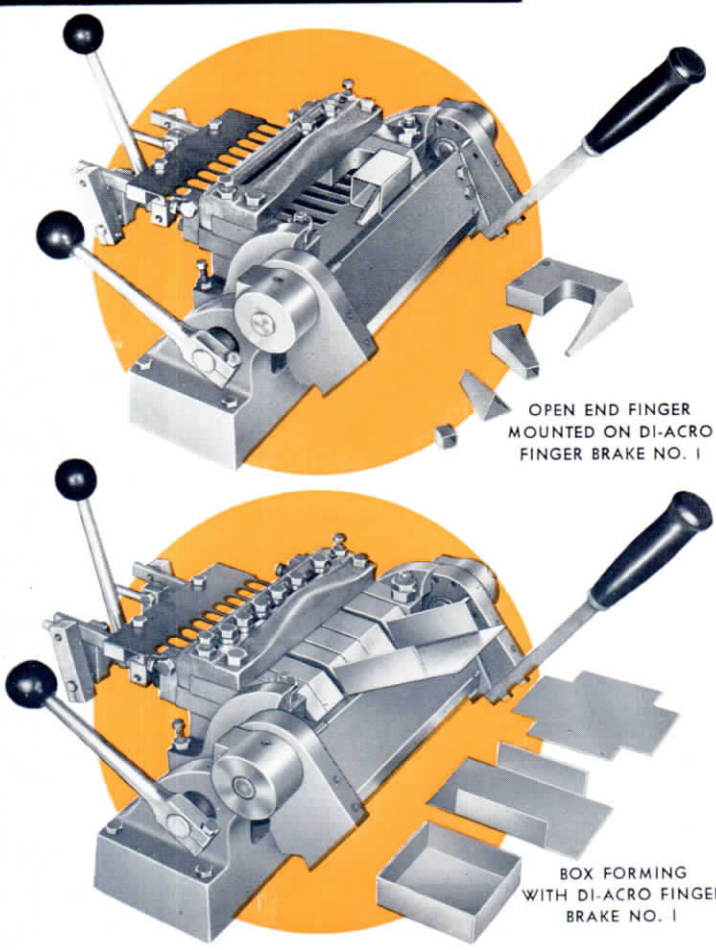
SPECIFICATIONS AND CAPACITIES

DI-ACRO FINGER BRAKE with Adjustomatic Gauge	NO. 1	NO. 2	NO. 3	NO. 4
Maximum Forming Width	6"	12"	18"	24"
Material Capacity—Sheet Steel	16 gauge	16 gauge	16 gauge	16 gauge
Maximum Bend—Finger Bar	125°	125°	125°	125°
Maximum Bend—Acute Angle Bar	150°	150°	150°	150°
Net Weight	55 lbs.	125 lbs.	230 lbs.	330 lbs.



... standard brake

DI-ACRO
FINGER BRAKE NO. 2



OPEN END FINGER
MOUNTED ON DI-ACRO
FINGER BRAKE NO. 1

BOX FORMING
WITH DI-ACRO FINGER
BRAKE NO. 1

DI-ACRO OPEN END FINGER

The OPEN END FINGER, illustrated at the left, is an extremely valuable accessory that can be mounted on the finger mount bar of the DI-ACRO FINGER BRAKE.

With this special part it is possible to form triangular, square and rectangular tubes as well as other similar parts which entirely enclose the forming bar, since the piece can be easily slipped off the open end of the finger when completed.

The tapered shape of this open end finger allows forming parts of smaller dimensions than shown in the table below when the length of the part is less than the capacity listed.

DI-ACRO BRAKE	NO. 1	NO. 2	NO. 3	NO. 4
Open End Finger	3/4" x 3"	1 1/2" x 6"	1 1/2" x 6"	1 1/2" x 9"
Maximum Capacity—Sheet Steel	18 gauge	18 gauge	18 gauge	18 gauge
Net Weight	2 lbs.	6 lbs.	6 lbs.	9 lbs.

DI-ACRO FINGER BAR

All DI-ACRO STANDARD and RADIUS BRAKES can be quickly converted into finger brakes by merely replacing their standard or radius forming bar with a DI-ACRO FINGER BAR.

This bar contains fingers graduated in size so when used in combinations they cover the entire box forming range from 1/2" to the maximum size of each model DI-ACRO BRAKE in 1/8" steps.

DI-ACRO BRAKE	NO. 1	NO. 2	NO. 3	NO. 4
Finger Bar Depth	2"	2 1/2"	2 1/2"	3"
Maximum Capacity—Sheet Steel	16 gauge	16 gauge	16 gauge	16 gauge
Net Weight	12 lbs.	30 lbs.	50 lbs.	70 lbs.

THE INCREASING USE OF LOW DUCTILE ALLOYS such as duraluminum and chrome molybdenum has brought about a demand for equipment that will form these materials without fracture.

The DI-ACRO RADIUS BRAKE is an excellent machine for this purpose as it has been designed to form a true center-line radius in all sheet materials within its capacity thereby distributing the bending stress over the entire radius and reducing the possibility of crystallization.

A complete range of radius bars from 1/16" to 1/2", that can be quickly mounted on this brake, provide the exact radius required in bending various gauges of alloy materials to the prescribed radius for the material thicknesses being formed.

Production quantities of precision parts in materials of

low ductility can be rapidly duplicated with assurance that a constant radius will be maintained without the possibility of fracture at the line of forming.

This precision machine is also extremely valuable for testing and determining the ductile quality of materials in experimental and research work as its versatility allows it to cover a wide operating range.

The design of a product often requires radius bends even though the material is very ductile and here too the DI-ACRO RADIUS BRAKE is extremely practical as it will produce excellent radius bends in all types of metals.

All accessories offered for DI-ACRO STANDARD and FINGER BRAKES are also available for the DI-ACRO RADIUS BRAKE and can be readily mounted to give it the same wide working range as other DI-ACRO BRAKES.

di-acro RADIUS BRAKE

***forms low-ductile metals without fracture . . .
performs all operations of other DI-ACRO brakes***

forming range 1/16" to 1/2" radius bends

RADIUS FORMING
WITH THE DI-ACRO
RADIUS BRAKE

TORSION TEST

The unlimited possibilities of the DI-ACRO RADIUS BRAKE in the testing laboratory are well illustrated by its use in an enamel torsion test that is carried on regularly by many companies.

To determine whether or not the enamel coating on a product meets the required standards, 2" wide strips are formed on the DI-ACRO RADIUS BRAKE to a 1" x 1" angle with a 1/8" inside radius. The angle is then placed in a torsion testing machine that twists it to a degree which simulates conditions that the finished product may have to pass through.

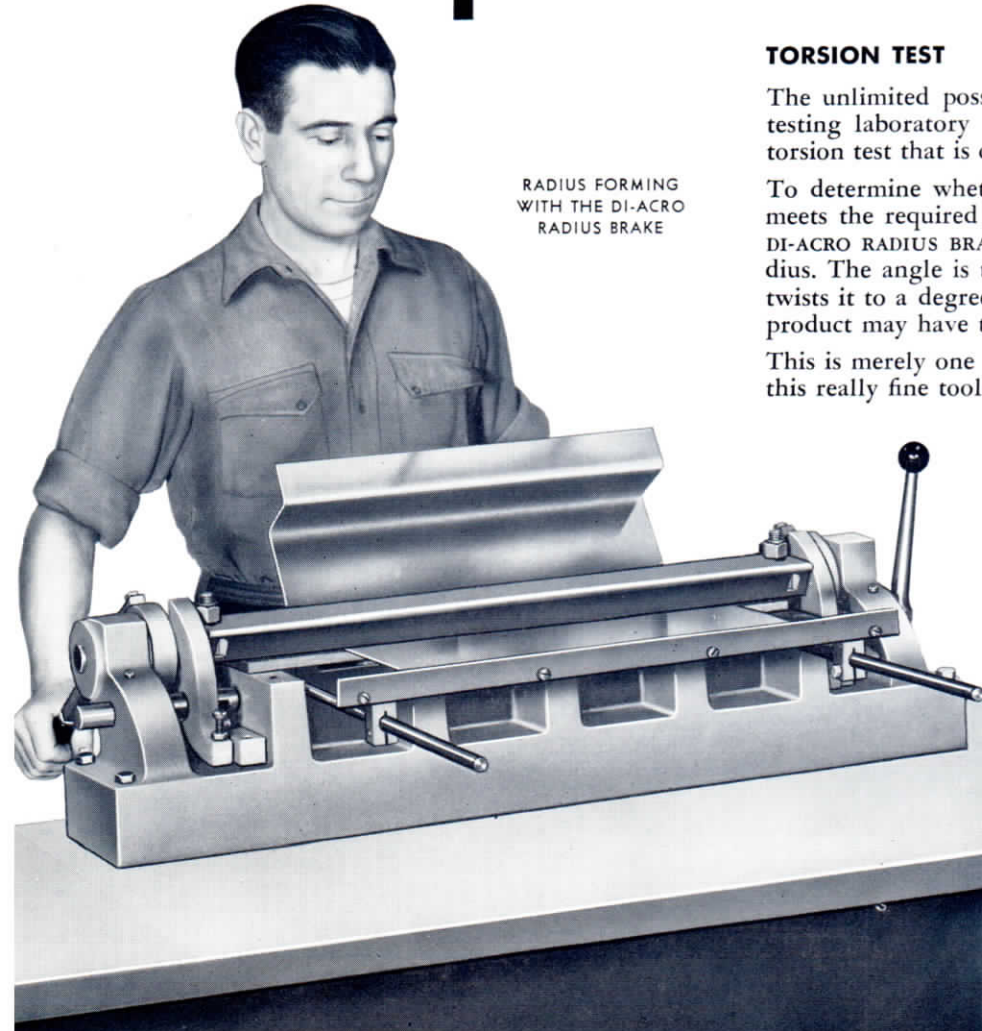
This is merely one example of the multitude of unusual uses for this really fine tool in the testing and research laboratory.

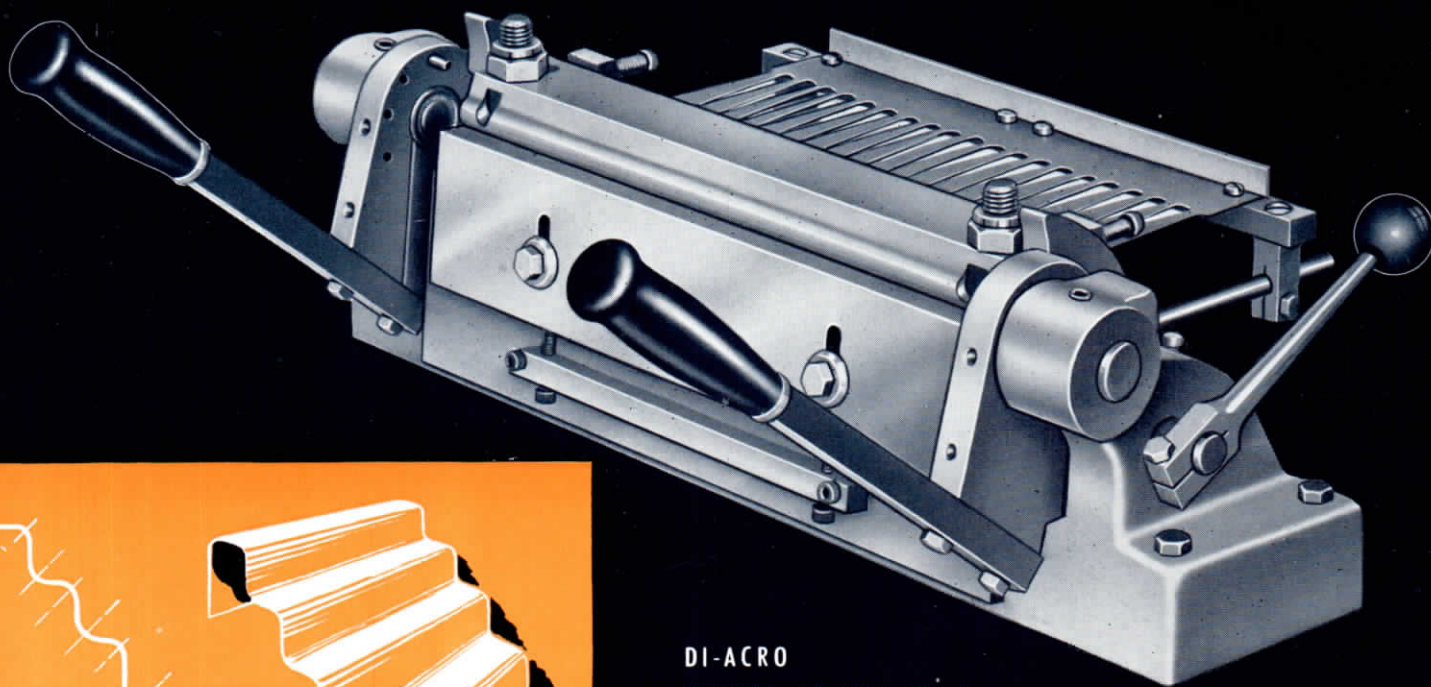
METHODS OF RADIUS FORMING

It is possible to form a radius bend in most ductile metals on a standard type brake by merely moving the forming bar back from the folding edge as the material will then accept a natural radius as pressure is applied against it.

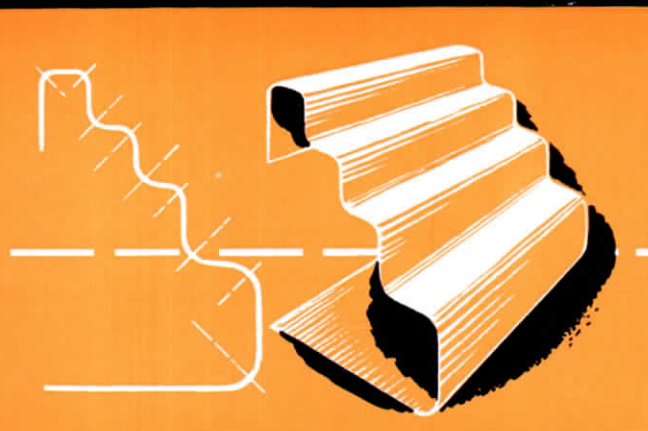
Using a forming bar with the desired radius, an even better bend can be obtained but in either instance materials of low ductility may fracture in such an operation.

By lowering the bed and folding bar of the DI-ACRO RADIUS BRAKE so that the folding bar swings a true arc around the radius edge of the forming bar, the material is positively controlled during the bending operation thereby removing the possibility of fracture.





DI-ACRO
RADIUS BRAKE NO. 2



CONSTRUCTION FEATURES

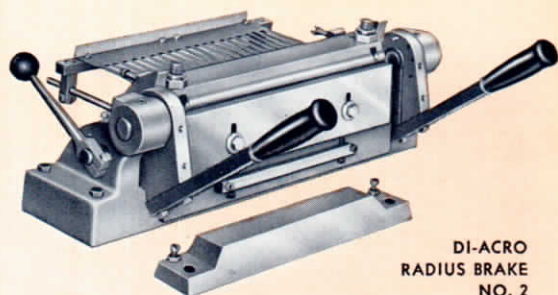
The DI-ACRO RADIUS BRAKE is produced from alloy castings and cold rolled steel bars with all parts that are subject to wear properly hardened and ground. Torrington Roller Bearings provide ease of operation.

A powerful clamp securely locks the material during the forming operation assuring an accurate bend and quickly releases the part for removal.

Easily adjustable angle degree stops positively control angularity and the material gauge accurately positions the bend assuring perfect duplication in all parts formed.

Two different handle positions allow operator choice for both convenience and greater production.

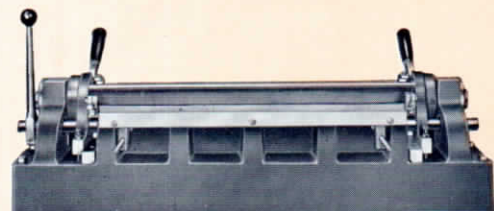
All contact surfaces are adjustable vertically, allowing them to be properly positioned for a true center-line radius bend of any radius within the machine's capacity.



DI-ACRO
RADIUS BRAKE
NO. 2



DI-ACRO RADIUS BRAKE NO. 4

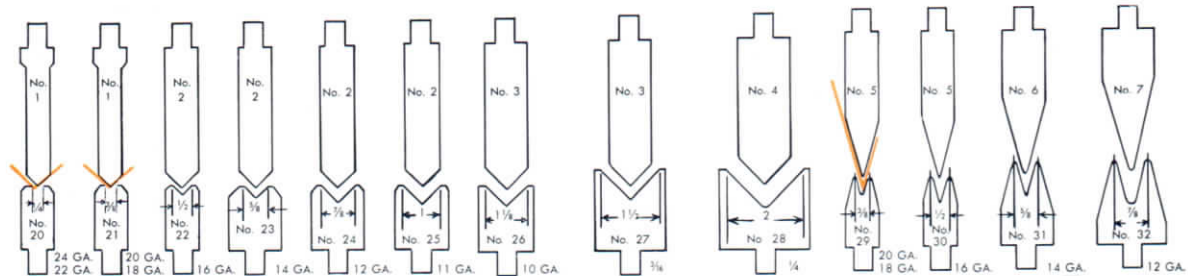


REAR VIEW—DI-ACRO RADIUS BRAKE NO. 4

SPECIFICATIONS AND CAPACITIES

DI-ACRO RADIUS BRAKE with Standard Gauge	NO. 2	NO. 4
Maximum Forming Width	12"	24"
Material Capacity—Sheet Steel	16 gauge	16 gauge
Maximum Bend—Radius Bar	125°	125°
Net Weight	110 lbs.	290 lbs.
Radius Bars available—Both Models		
Radius Bar A	1/16" R and	3/32" R
Radius Bar B	1/8" R and	5/32" R
Radius Bar C	3/16" R and	7/32" R
Radius Bar D	1/4" R and	5/16" R
Radius Bar E	3/8" R and	1/2" R

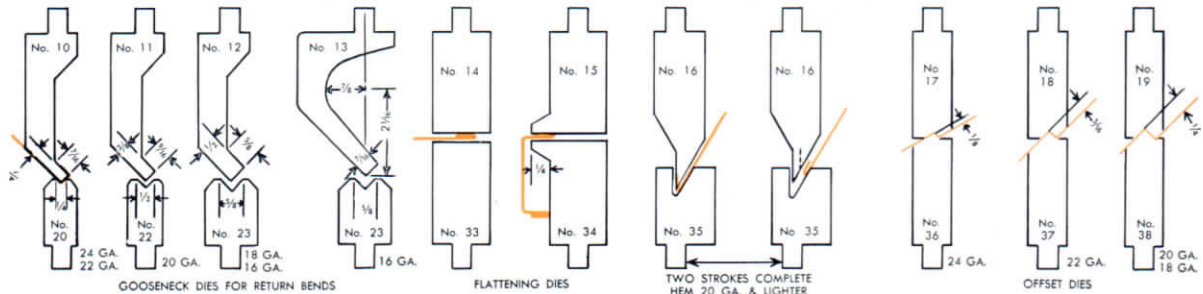
STANDARD DIES FOR THE DI-ACRO PRESS BRAKE



Dies No. 20 thru 28 will form any angle to 90°.

Dies No. 29 thru 32 will form any angle to 30°.

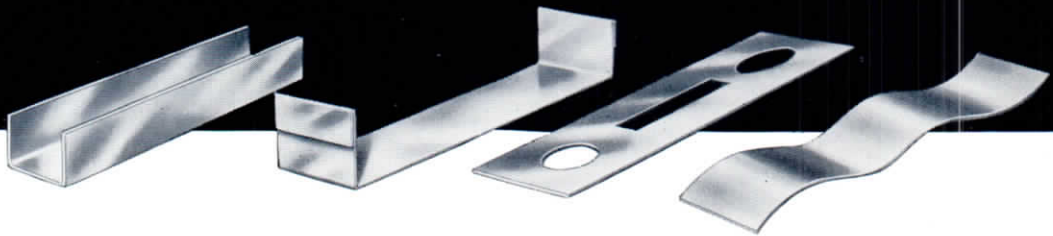
Adjustment of Press Brake Bed controls degree of angle.



SEND FOR PRESS BRAKE DIE FOLDER FOR COMPLETE INFORMATION

di-acro
PRESS
BRAKE

8 tons of power for bending, blanking, box forming,
corrugating, curling, hemming, punching, flattening

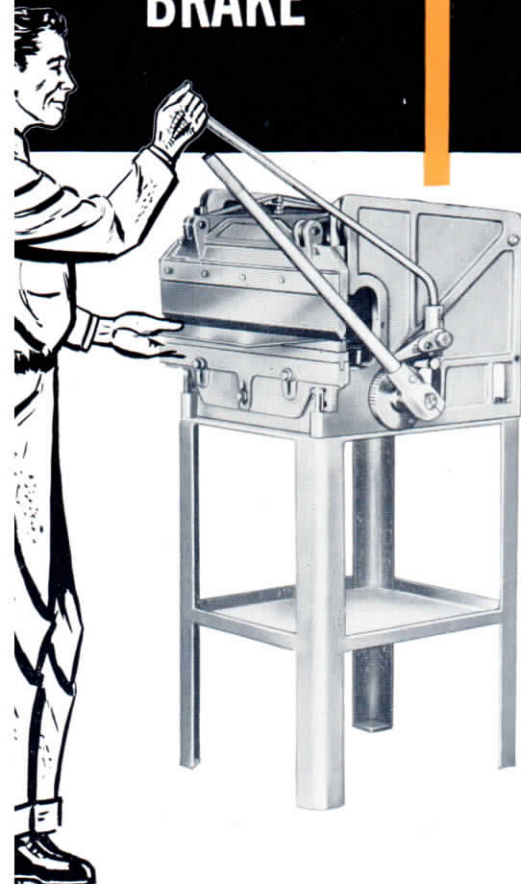


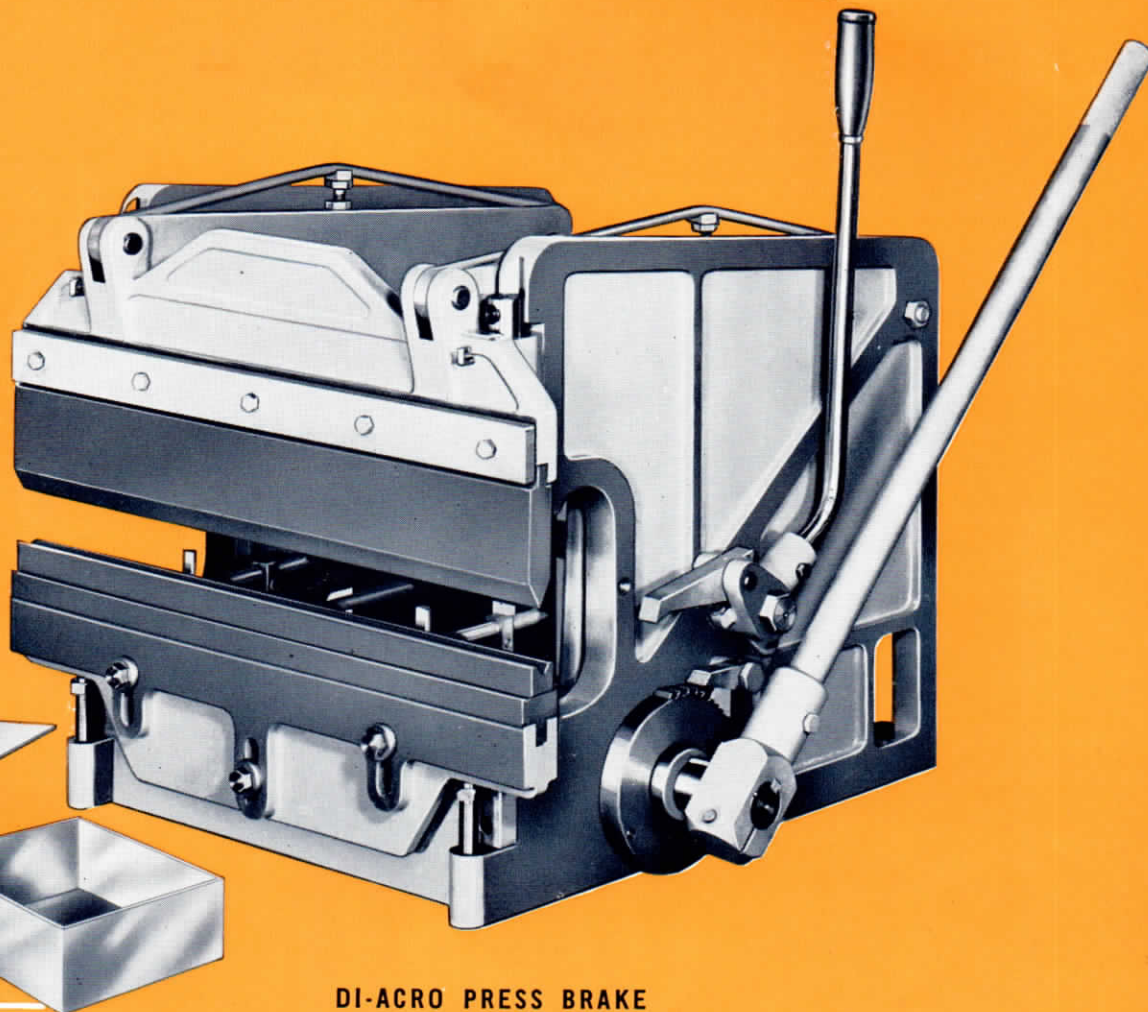
The new, hand-operated Di-Acro Press Brake has been designed to perform the many duplicating operations required for short run jobs that cannot be satisfactorily or economically performed with leaf style folding brakes or other types of metal working machines.

Duplicating operations with the Di-Acro Press Brake are practically unlimited. In addition to simple angle and radius bends, it will perform curling, beading, corrugating, flanging, hemming, seaming, flattening, punching, blanking, drawing, straightening and joggling as well as channel and box forming operations. The Di-Acro Press Brake is the only manually operated press brake on the market today that provides all of the features offered in larger power press brakes. Its 8-tons of power makes practical the many valuable features of a press brake for jobs that are impractical for power operation.

A lever operated, roller bearing cam produces ample power for average operations and a ratchet drive greatly multiplies this power when forming heavier materials, thereby providing an extremely wide operating range.

Versatility of all press brakes is achieved through the use of dies designed to perform various types of operations. A large percentage of the desired bending operations can be performed with a small variety of dies. A line of standard dies is available for the Di-Acro Press Brake. These dies are interchangeable with other standard press brakes.





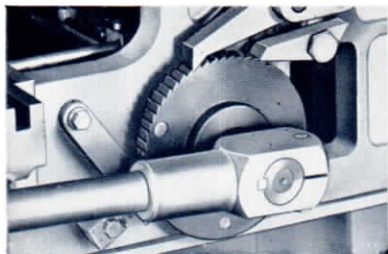
DI-ACRO PRESS BRAKE

SPECIFICATIONS

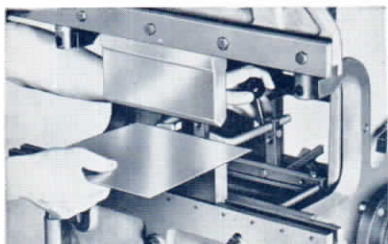
Length of Bed and Ram	24"
Distance between housings—to clear.	14"
Stroke of Ram	2"
Adjustment of Bed	2"
Die space from Bed	6"
Depth of gap	6"
Bench space	26" x 24"
Net Weight	340 lbs.
Shipping Weight	410 lbs.
Export Weight	430 lbs.
Press Brake Stand—Net Weight	120 lbs.

CAPACITIES

16 gauge steel over 1/2" die opening	24"
13 gauge steel over 3/4" die opening	18"
10 gauge steel over 1 1/8" die opening	12"
3/16" steel plate over 1 1/2" die opening	9"
1/4" steel plate over 2" die opening	6"



HEAVY MATERIALS are easily formed by the power multiplying Ratchet Drive which provides 8 tons of pressure.



GAUGING MATERIAL is easily accomplished through use of the lever operated back gauge called the Adjustomatic.



DI-ACRO PRESS
BRAKE STAND

Welded stand of steel plate is recommended for highest possible output and most efficient operation of the Press Brake. Finished in machine tool gray to harmonize with Di-Acro Press Brake.

NOW you can eliminate special orders and costly delays when individual springs are needed for replacements, prototypes and experimental work. Do away with expensive short run production on automatic spring machines.

The Di-Acro Spring Winder winds and duplicates one or hundreds of springs up to 1½" O.D. to any length . . . uses round, flat, square or rectangular wire to ⅛" diameter. It's a complete unit that sets up in a jiffy. A cut-off device is incorporated right in the machine.

You can make the springs you need in minutes right in your own shop.

If you are using springs as a component part or have occasional need for them in your repair or maintenance department, you'll find the Di-Acro Spring Winder indispensable for eliminating delays.

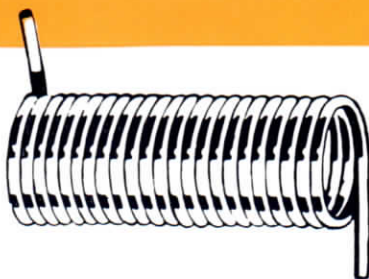
It's simple and easy to operate. No experience or skill is required. The wire is held securely during the winding operation without kinking. Tension is always the same.

di-acro

**SPRING
WINDER**

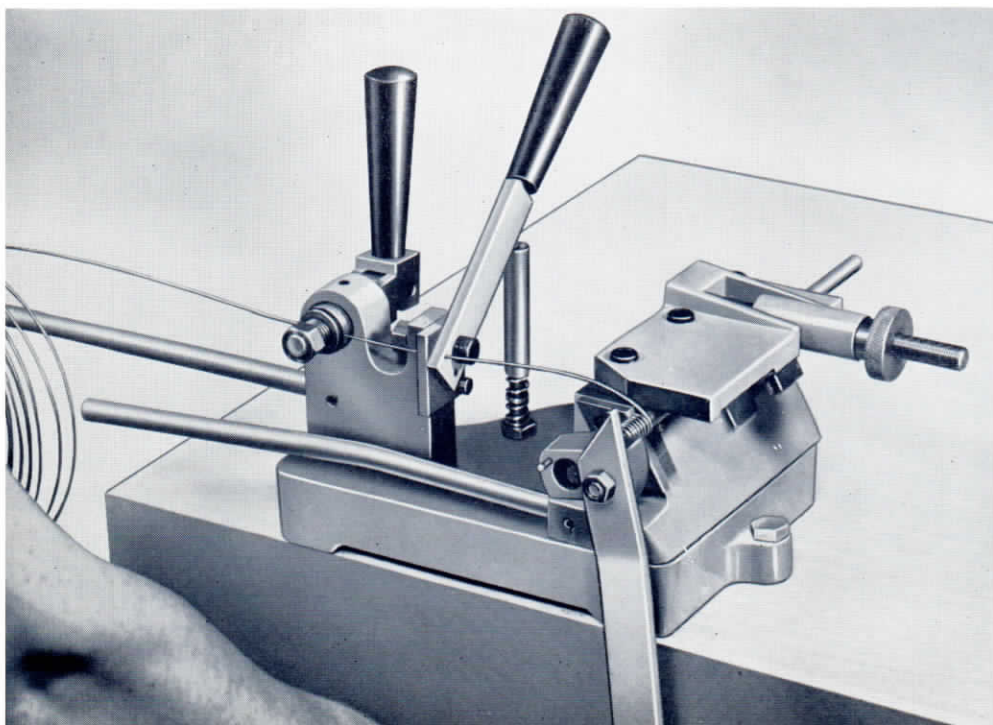
makes springs in seconds . . . to your needs!

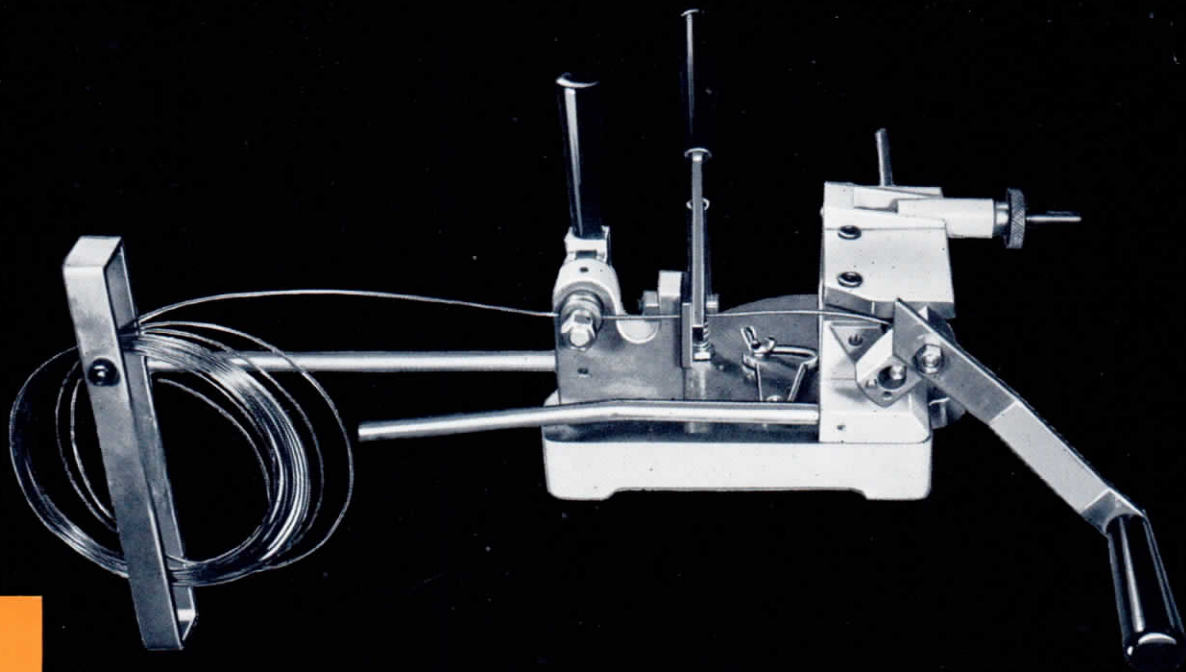
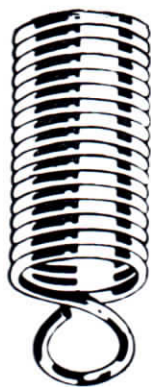
***wind one or a hundred—extension springs, compression springs,
torsion springs—left hand or right hand!***



SPRINGS IN SECONDS

How to wind a spring in less time than it takes to tell about it: Select an arbor of the desired size, lock the handle to it, insert arbor in Spring Winder and tighten clamp. Run wire through tension disc, through cut-off device and under cam locking mechanism. Set tension, wind spring, unlock material, remove arbor, release tension, cut off spring, and there you have it . . . a perfectly formed spring in seconds.





DI ACRO SPRING WINDER

DI-ACRO SPRING WINDER winds extension, compression and torsion springs with arbor range from $\frac{1}{8}$ " to $1\frac{1}{2}$ " O.D., handles wire to $\frac{1}{8}$ " diameter. Net weight—30 lbs. Shipping weight—33 lbs. Export weight—37 lbs.

COMPLETE, READY TO USE!

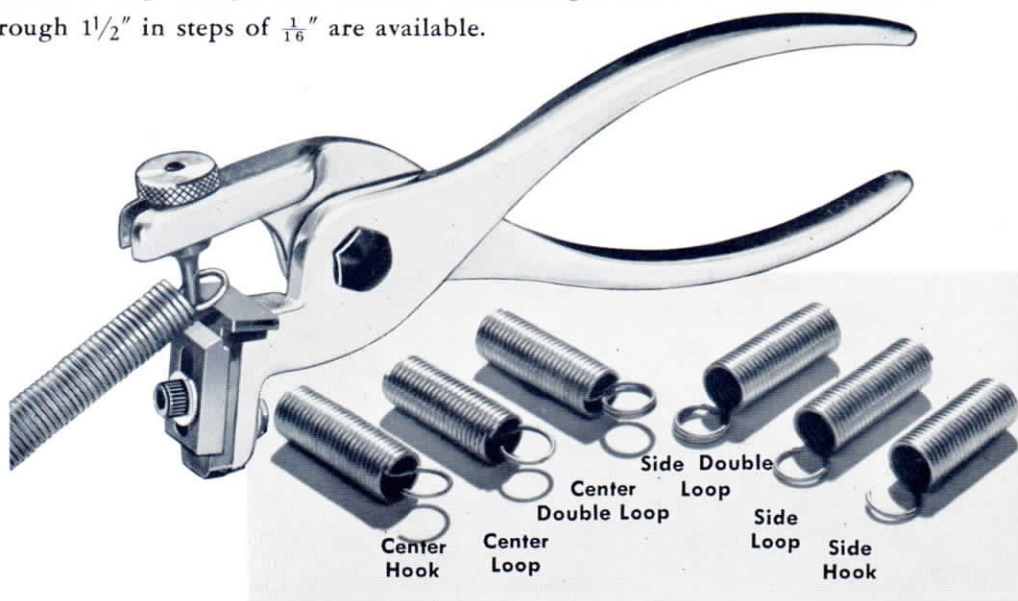
Not only is the Di-Acro Spring Winder a self contained unit, but it comes complete with six 12" arbors; $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ ", and $\frac{3}{4}$ ", and four $\frac{1}{4}$ pound coils of music wire. Illustrated operating instruction furnished. Longer arbors as well as arbors of $\frac{1}{8}$ " through $1\frac{1}{2}$ " in steps of $\frac{1}{16}$ " are available.

SPRING LOOPING TOOL

A valuable accessory . . . loops springs from $\frac{1}{8}$ " to $\frac{1}{2}$ " O.D.

Convenient, easy-to-operate hand tool forms perfect loops on the ends of springs coiled from wire up to .062" diameter.

Spring Looping Tool is delivered complete with two interchangeable forming punches. The small punch is for looping wire up to .025" diameter and the large punch is for wire from .025" to .062" diameter. Illustrated instructions are included with each looping tool.



A REALLY DIFFERENT metal working tool with a terrific potential in forming all ductile sheet and strip material is now available in the new DI-ACRO ROLLER.

Although various types of forming rolls have been offered for many years, the operating range of these machines has been limited because of their design that often requires several operations to complete a single bend.

This limitation has been overcome in the DI-ACRO ROLLER by incorporating a lever operated cam that raises and lowers the idler roll to a pre-set position making it possible to form a perfect circle of any diameter in only two passes through the rolls.

Because the position of the idler roll can be positively controlled at all times, numerous bends can be made in a single sheet without removing the material from the rolls. Bends can also be located at any point in the

material with unformed sections on both sides of the bend—an impossibility with an ordinary slip roll.

Production quantities of parts can be accurately duplicated with the DI-ACRO ROLLER as the idler roll is always returned by the lever cam to its identical radius position.

Minimum radius that can be produced with the DI-ACRO ROLLER is determined by the size of the rolls, with no practical limitation to the maximum radius, as that is determined by the position of the idler roll.

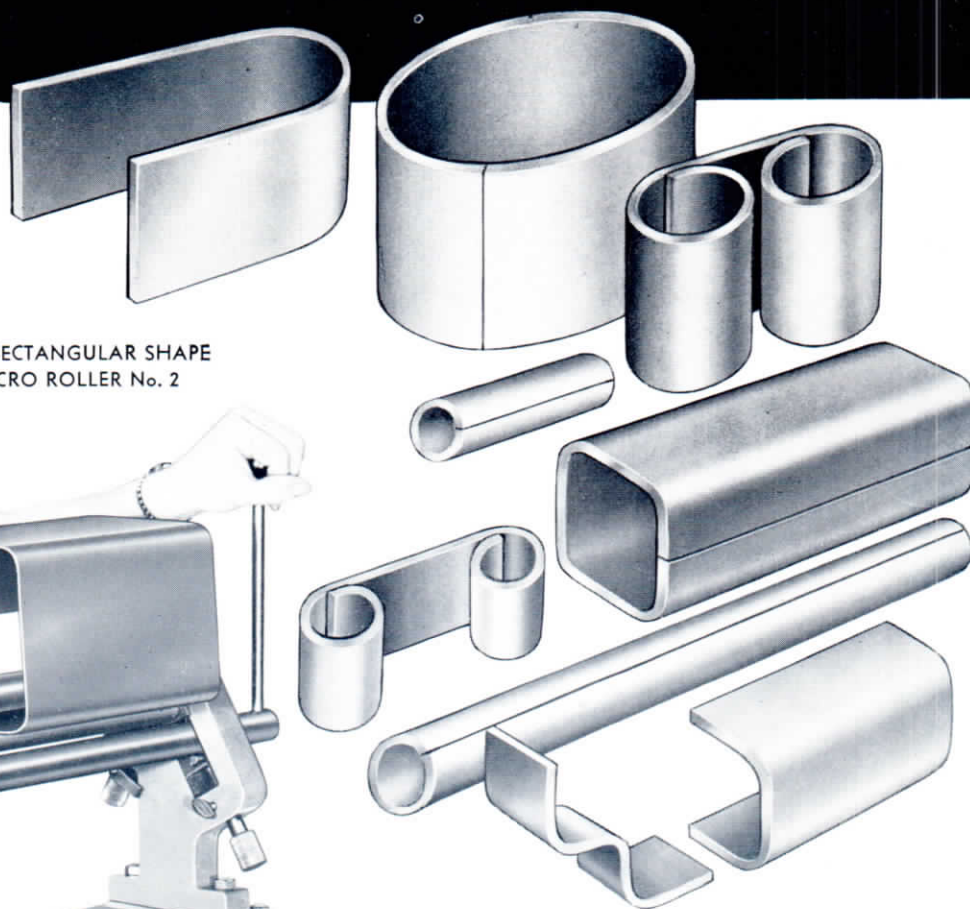
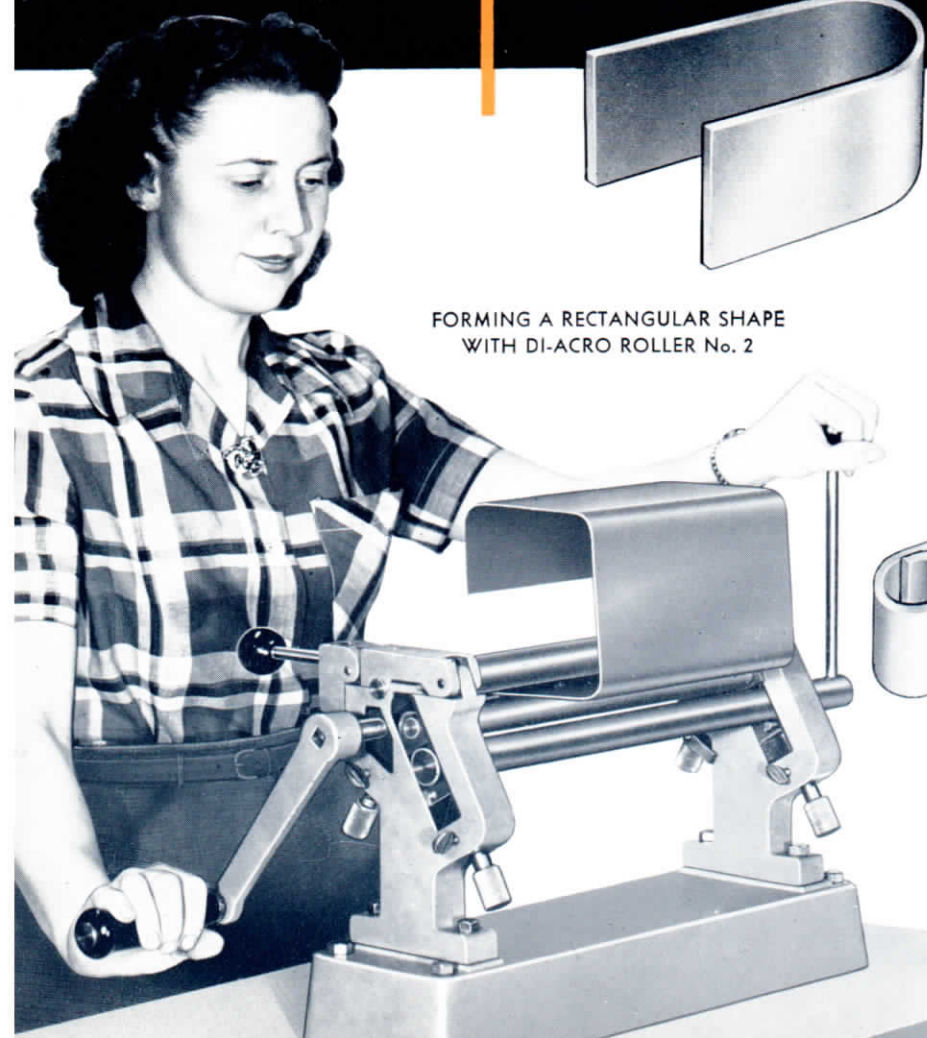
In addition to sheets and strips, it is also possible to form round, flat and square stock and other ductile materials with this precision machine by merely grooving the bending rolls to fit the shape of the material.

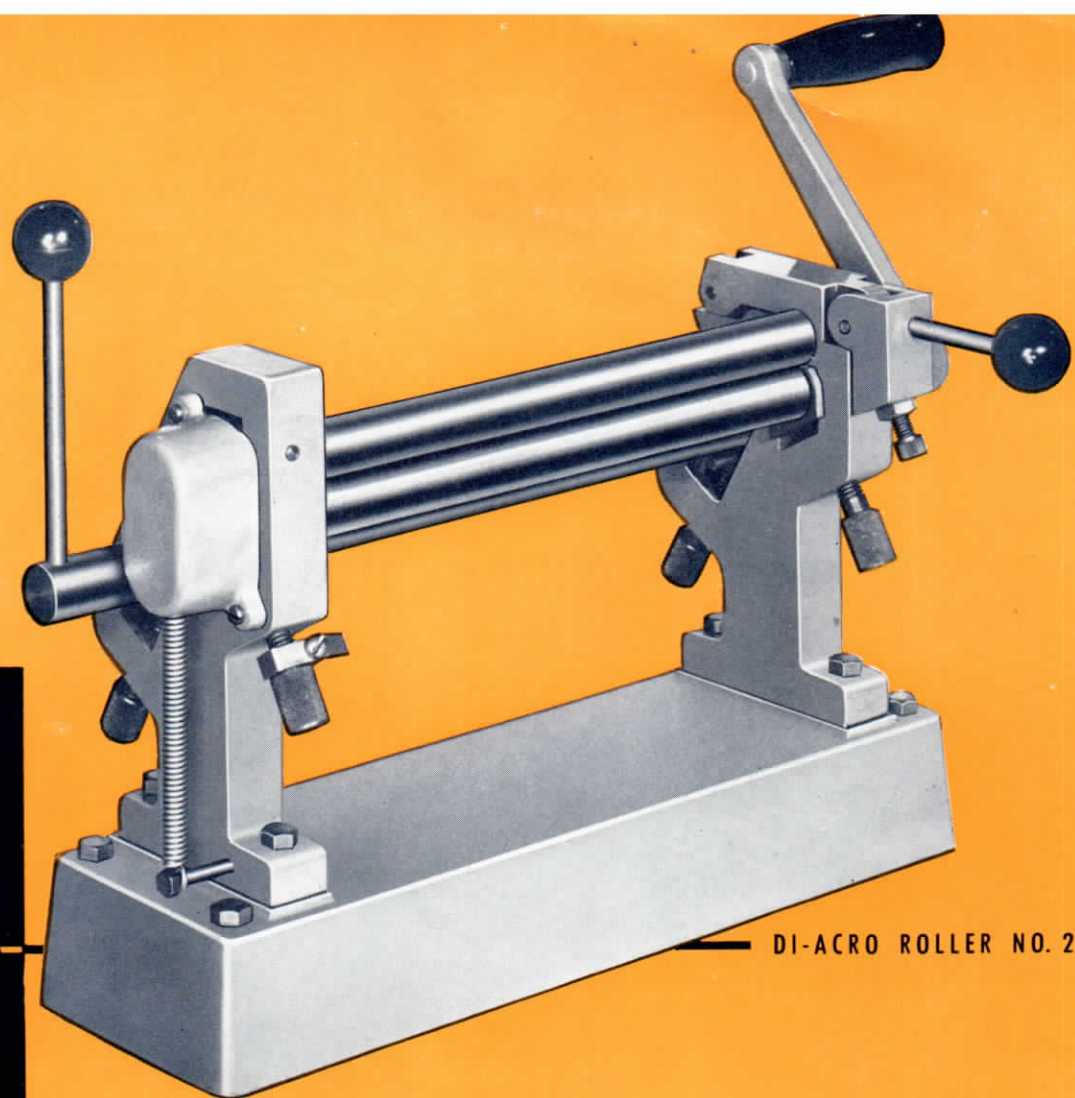
The parts below are typical of the forming operations possible with the DI-ACRO ROLLER although as with all other DI-ACRO MACHINES its potential is only limited by the operator's ingenuity.

di-acro ROLLER

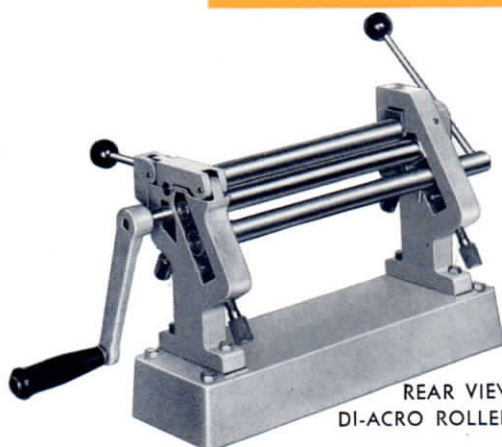
*a new and really different metal working tool
with a terrific potential in all ductile sheet materials....
forms any size radius 1/2" to infinity*

FORMING A RECTANGULAR SHAPE
WITH DI-ACRO ROLLER No. 2





DI-ACRO ROLLER NO. 2



REAR VIEW
DI-ACRO ROLLER NO. 2

CONSTRUCTION FEATURES

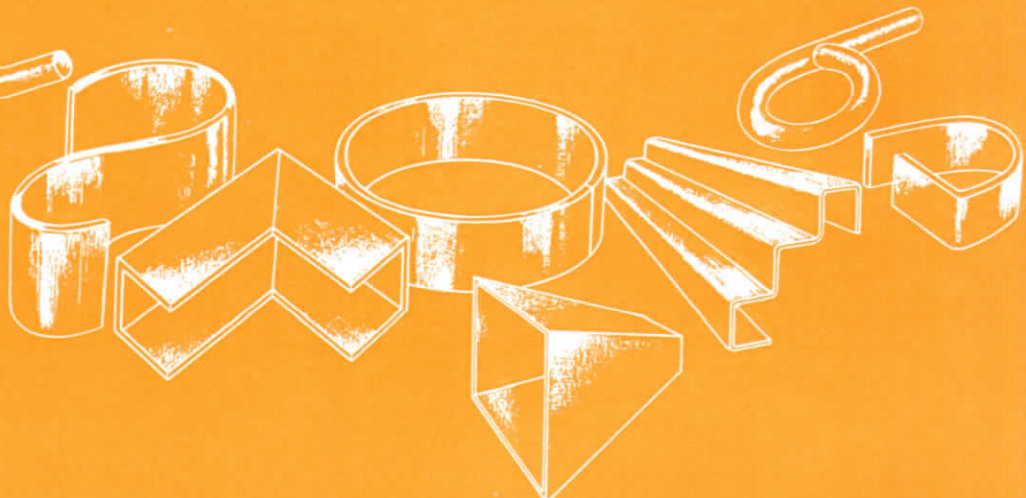
The DI-ACRO ROLLER is produced from alloy castings and cold rolled steel bars, with all parts that are subject to wear, properly hardened and ground.

Rolls are easily adjusted for material thickness and radius of bend with provision for locking in position when duplicating quantities of parts.

A lever operated cam allows idler roll to be pre-set for radius of desired bend, lowered for insertion of material and then raised into operating position with a press action.

Standard equipment includes a short operating handle for production speed in the lighter operations and a longer handle to reduce operator effort in the heavier materials.

DI-ACRO ROLLER	No. 1	No. 2	No. 2A	No. 3	No. 4	No. 5	No. 6	No. 7
Maximum Forming Width	6"	12"	12"	18"	24"	30"	36"	42"
Material Capacity—Steel..	16 gauge	22 gauge	16 gauge	18 gauge	20 gauge	22 gauge	22 gauge	24 gauge
Diameter of Rolls.....	1"	1"	2"	2"	2"	2"	2"	2"
Minimum Radius.....	1/2"	1/2"	1"	1"	1"	1"	1"	1"
Maximum Radius.....	No limit	No limit	No limit	No limit	No limit	No limit	No limit	No limit
Net Weight.....	40 lbs.	50 lbs.	100 lbs.	135 lbs.	175 lbs.	225 lbs.	275 lbs.	325 lbs.



*"IMPOSSIBLE" jobs
are performed with a*

***di-acro* ROLLER**



Eight models available in six
through 42 inch forming widths

di-acro ROLLER

is a versatile forming machine which is easily set up for experimental or production operations in sheet metals. A cam actuated idler roll—an exclusive feature of the new Di-Acro Roller—makes it possible to form perfect circles in sheet material in just two passes through the rolls. This is an impossibility with any other slip roll now on the market.

Also because of this unique feature, bends can be located at any point along a sheet of

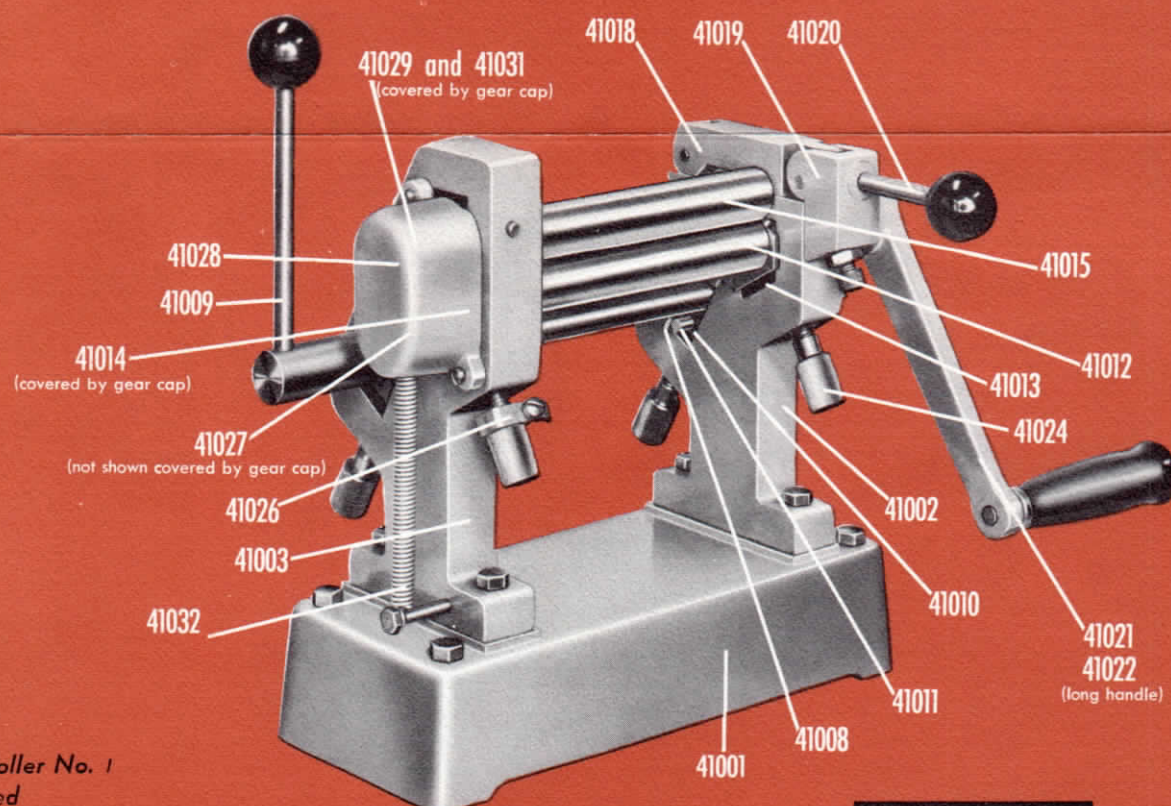
material and a wide variety of shapes—with straight sections on one or both sides of a bend—can be produced.

Parts can be duplicated with great accuracy since the idler roll always returns to its pre-set position. In addition to sheet material, many other ductile materials can be formed with Di-Acro Rollers. Special rolls can be supplied for special forming jobs.

For most efficient operation, the roller should be bolted to a rigid stand or bench.

DI-ACRO ROLLER AVAILABLE IN EIGHT MODELS	No. 1	No. 2	No. 2A	No. 3	No. 4	No. 5	No. 6	No. 7
Maximum Forming Width...	6"	12"	12"	18"	24"	30"	36"	42"
Material Capacity—Steel....	16 gauge	22 gauge	16 gauge	18 gauge	20 gauge	22 gauge	22 gauge	24 gauge
Diameter of Rolls.....	1"	1"	2"	2"	2"	2"	2"	2"
Minimum Radius.....	1/2"	1/2"	1"	1"	1"	1"	1"	1"
Maximum Radius.....	No limit	No limit	No limit	No limit	No limit	No limit	No limit	No limit
Net Weight.....	40 lbs.	50 lbs.	100 lbs.	135 lbs.	175 lbs.	225 lbs.	275 lbs.	325 lbs.

PERFORMANCE OF DI-ACRO PRECISION METALWORKING MACHINES BACKED BY WARRANTY AGREEMENT. APPLICATION ENGINEERING SERVICE ALWAYS AVAILABLE.



Di-Acro Roller No. 1
Is Illustrated

FRONT

41001—Base—Model 1
41002—Side Frame R
41003—Side Frame L
41008—Cam Stop Pins
41009—Idler Roll Cam Lever
41010—Cam Blocks
41011—Cam Block Pins

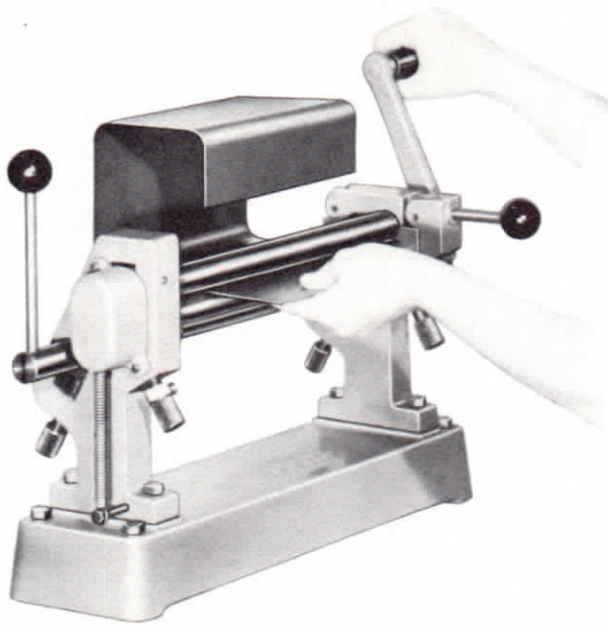
41012—Lower Pinch Roll—
Model 1
41013—Lower Pinch Roll
Box R
41014—Lower Pinch Roll
Box L
41015—Upper Pinch Roll—
Model 1

41018—Clamp
41019—Clamp Lock
41020—Clamp Stud
41021—Short Handle
41022—Long Handle
41024—Adjusting Screws
Front

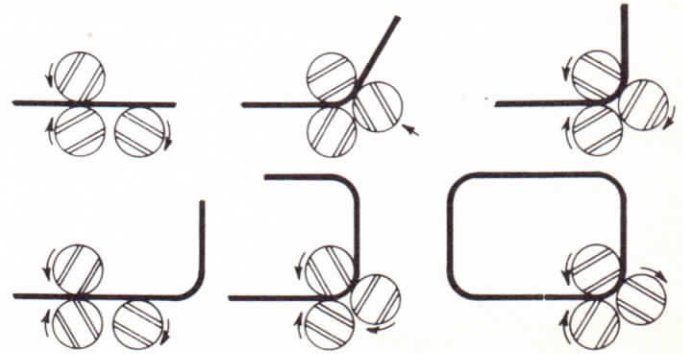
41026—Adjusting Screw Stop
41027—Spring Hook
41028—Gear Cap
41029—Gear Pins
41031—Gears
41032—Pinch Roll Spring—
Model 1

BENDS CAN BE LOCATED AT **ANY** POINT IN METAL

being formed in the new Di-Acro Roller.



Flat material can be rolled part way through the rolls (as illustrated) and when the cam lever is engaged, the idler roll is raised and a bend is formed. Disengaging the cam lever lowers the idler roll, and the material again passes through the rolls in a horizontal or flat position. It is thus possible to form a wide variety of shapes with the Di-Acro Roller.

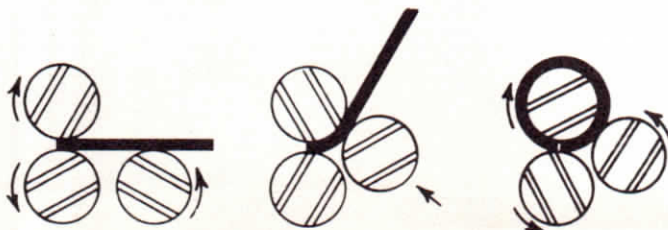
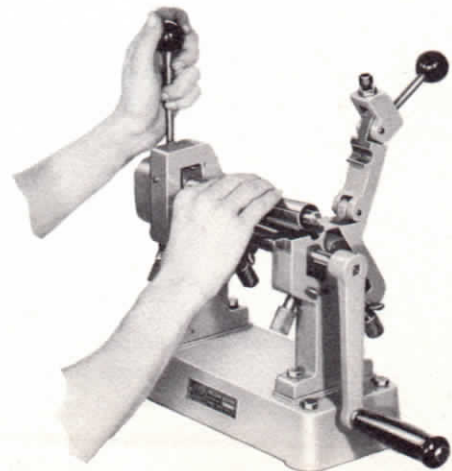
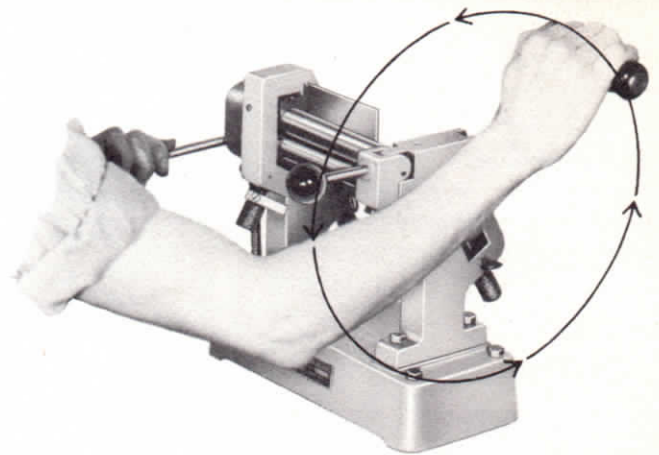


HOW TO FORM SMALL DIAMETER CIRCLES IN **ONE** PASS

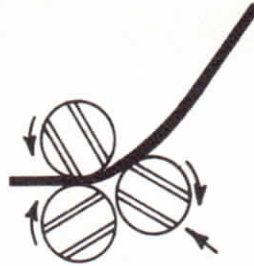
through the Di-Acro Roller.

Circles, the same diameter as the diameter of the rolls and slightly larger, can be formed with the Di-Acro Roller in just one pass. To make adjustment for material thickness and to determine length of material needed, see the instructions given under "Two Pass Circle Forming". To adjust for circle diameter, place cam lever in horizontal or operating position. Set idler roll by turning up both rear adjusting screws 41025 so that material fits snugly and evenly between idler roll and upper pinch roll.

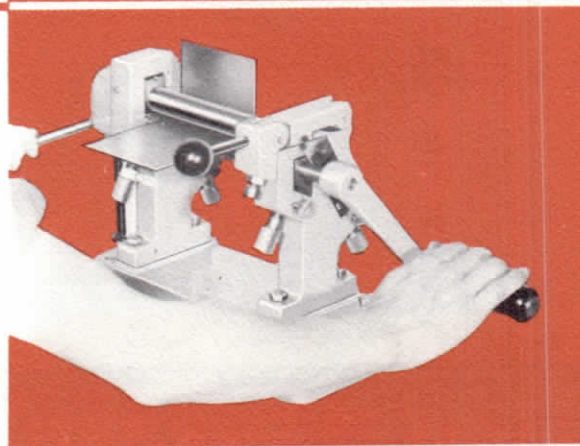
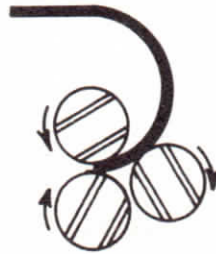
To operate, insert material to be formed from the rear of the machine with cam lever in vertical position. Material should be inserted in machine so that the rolls just "nip" the end of the material. Then, pull the cam lever into operating position and turn the handle in a counter clockwise direction. If adjustments are correct and material is the right length, a perfect circle is formed.



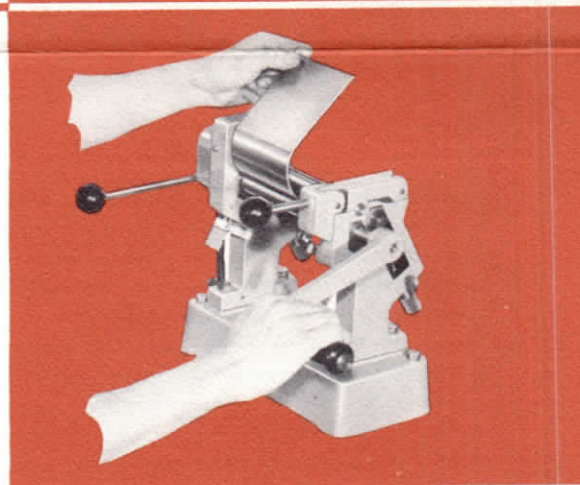
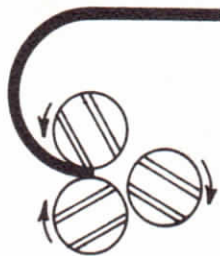
To adjust roller for diameter of circle to be formed—place cam lever 41009 in vertical position. Set idler roll with adjusting screws 41025 on the back of the roller. Thumb screws B (rear photo) must be loosened in order to make adjustment. No exact formula can be followed when making this adjustment because material "springback" varies with the kind of material being formed. Only by test forming several pieces can the correct adjustment be obtained. Rolls must be adjusted exactly parallel or the material will spiral during the rolling process.



To operate roller—after diameter adjustment has been made—insert material from front of roller and turn operating handle 41021 in a clockwise direction until approximately half the material has passed through the rolls. Then, while still turning, raise the idler roll by pulling the cam lever into operating or horizontal position. Continue turning until a half circle has been formed. It is important that you turn the operating handle while engaging the cam lever for if the cam lever is engaged while the rolls are not turning, a noticeable flat spot or line will be formed across the width of the material.



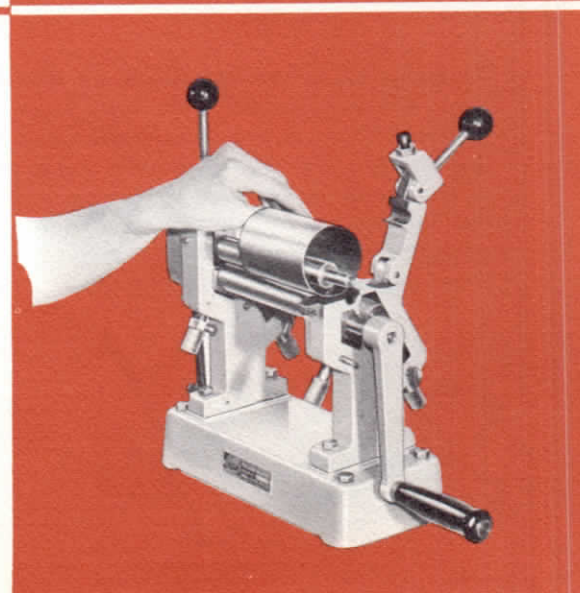
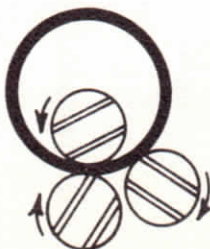
After half circle has been formed, re-insert the formed end of the material into the roller (as illustrated) and turn operating handle—again in a clockwise direction—to form a complete circle.



To remove formed part, lift clamp handle 41020, turn adjusting screw stop 41026 to left to raise upper pinch roll and slide material off roll.



If the material is not long enough or if the formed material is not the proper diameter, additional samples will have to be made. Thousands of identical parts can be precisely duplicated when proper adjustment of the roller has been made.



READ HOW!

- 1 FORM Any Diameter Circle in Two Operations.
- 2 FORM Small Diameter Circles or Tubing In Just One Operation.
- 3 FORM Rectangles, Ovals and Odd Shapes.
- 4 FORM Wire, Other Special Stocks.
- 5 FORM Material You Need When You Need It.

WITH THE NEW DI-ACRO ROLLER YOU CAN

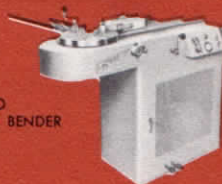
a complete line...

of Di-Acro Precision Metalworking Machines is available to aid you in your "Die-Less Duplicating" problems.

DI-ACRO
PUNCH PRESSES
(hand operated)



DI-ACRO
POWER BENDER



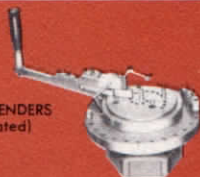
DI-ACRO
ROD PARTER
(hand operated)



DI-ACRO
POWER PARTER



DI-ACRO BENDERS
(hand operated)



DI-ACRO POWER
PUNCH PRESSES



DI-ACRO
POWER NOTCHER



DI-ACRO BRAKES
(standard, finger
and radius)



DI-ACRO NOTCHER
(hand operated)



DI-ACRO SHEARS
(hand operated)



DI-ACRO
POWER SHEARS



DI-ACRO
ROLLERS



YOURS FOR THE ASKING . . . WRITE TODAY! New 32 page catalog—contains complete illustrations and specifications covering all 38 hand and power operated Di-Acro Precision Machines.



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W. J. Foss Company
112-116 Broadway
SPRINGFIELD 3, MASSACHUSETTS

di-acro
PRECISION
METALWORKING
MACHINES

HOW TO FORM CIRCLES IN JUST TWO PASSES

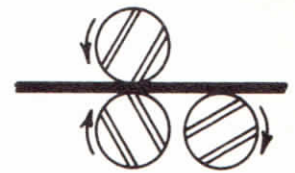
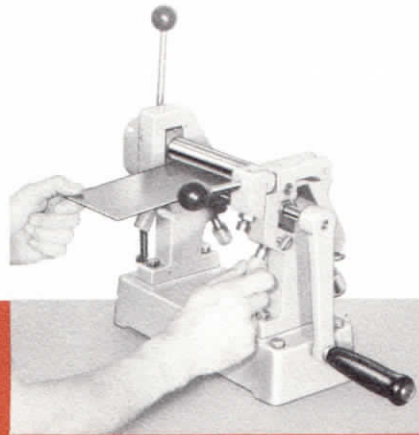
through the Di-Acro Roller.

Length of material necessary to form the desired size circle is the first consideration in circle forming.

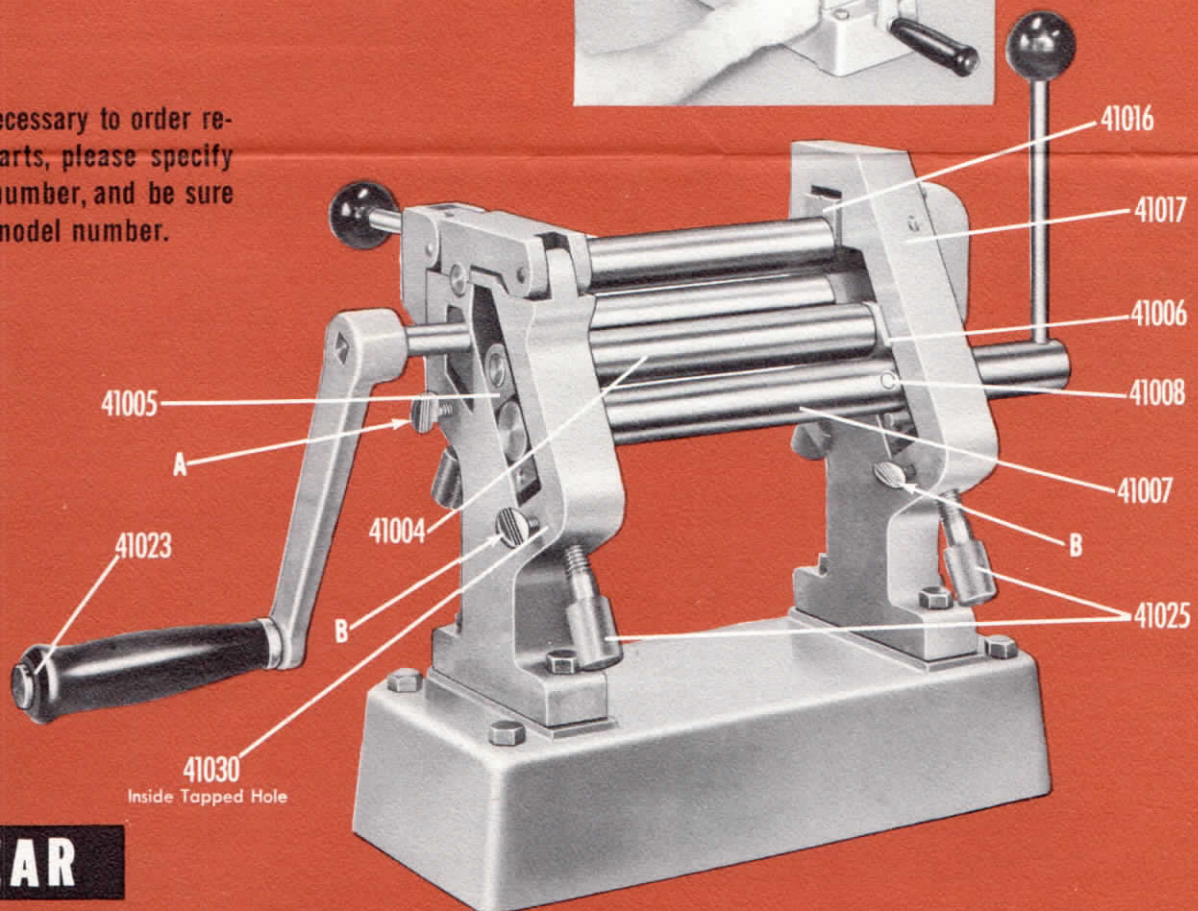
To determine approximate length of material needed—use the formula $C = \pi D$. C is Circumference. π equals 3.1417. D is Diameter. For example, to find the length of material needed (C or Circumference) to form a circle 4" in diameter, multiply 3.1417 by 4". Result—12.5667 is the circumference or approximate length of material needed. Cut a few pieces of material to this length for test forming. Material may have to be lengthened or shortened depending upon results of the test forming run.

To adjust roller for material thickness—adjust lower pinch roll for material thickness by turning adjusting screws 41024. Loosen thumb screws A (shown

on rear photo) on right side of adjusting screws to make this adjustment and tighten them after adjustment has been made. Insert the flat length of material between the rolls from the front of the machine and set rolls so material fits tightly. The left adjusting screw has a screw stop 41026 fit around it. This must be loosened when adjusting and tightened when rolls have been set.



If it is necessary to order replacement parts, please specify the part by number, and be sure to give the model number.



REAR

41004—Idler Roll—Model 1
41005—Idler Roll Box R
41006—Idler Roll Box L

41007—Idler Roll Cam—Model 1
41008—Cam Stop Pin
41016—Pivot Box

41017—Pivot Pin
41023—Handle Stud
41025—Adjusting Screws Rear
41030—Spacers

di-acro

Die-Less Duplicating

QUOTATION SHEET

NO. 32

Effective
April 1, 1954

PRECISION MACHINES

W. J. FOSS COMPANY
112-114-116 BROADWAY
SPRINGFIELD 3, MASS.

DI-ACRO HYDRA-POWER BENDER No. 6

Code—DIHYD

With Toggle Clamp and Forming Roller

Complete with all electrical and hydraulic equipment..... \$ 2045.00

Complete Mounting Plate Setup No. 8..... 195.00

Motor... 3 H.P.—220-440 Volt A.C. Three Phase 60 Cycle
Bending Speed (Other speeds optional) 6 R.P.M. to 12 R.P.M.
Radius Capacity (Can be increased) 9"
Floor Space 18" x 54"
Weight—Net 950 lbs. Crated—1150 lbs. Export—1250 lbs.

DI-ACRO HYDRA-POWER BENDER No. 8

Code—DIRAP

With Mounting Plate and Forming Nose

Complete with all electrical and hydraulic equipment..... 1985.00

Complete Toggle Clamp Setup No. 6..... 255.00

Motor... 3 H.P.—220-440 Volt A.C. Three Phase 60 Cycle
Bending Speed (Other speeds optional) 6 R.P.M. to 12 R.P.M.
Radius Capacity (Can be increased) 24"
Floor Space 18" x 54"
Weight—Net 1000 lbs. Crated—1200 lbs. Export—1300 lbs.

DI-ACRO BENDER No. 1

Code—DIACK 75.00

Material Capacity..... 3/16" round steel bar
Radius Capacity 2"..... Height of Forming Nose 1/2"
Weight—Net 22 lbs. Shipping—25 lbs. Export—35 lbs.
EXTENSION HANDLE—2 1/2" extra leverage..... \$7.50
QUIK-LOK CLAMP with one clamping block..... \$40.00

DI-ACRO BENDER No. 1A

Code—DIBEN 135.00

Material Capacity..... 5/16" round steel bar
Radius Capacity 6"..... Height of Forming Nose 3/4"
Weight—Net 55 lbs. Shipping—75 lbs. Export 85 lbs.
QUIK-LOK CLAMP with one clamping block..... \$40.00

DI-ACRO BENDER No. 2

Code—DISUB 190.00

Material Capacity..... 1/2" round steel bar
Radius Capacity 9"..... Height of Forming Nose 1"
Weight—Net 120 lbs. Shipping—160 lbs. Export—190 lbs.
EXTENSION HANDLE—18" extra leverage..... \$10.00
QUIK-LOK CLAMP with one clamping block..... \$65.00

DI-ACRO BENDER No. 3

Code—DIPRO 255.00

Material Capacity..... 5/8" round steel bar
Radius Capacity 12"..... Height of Forming Nose 1 1/2"
Weight—Net 205 lbs. Shipping—290 lbs. Export—300 lbs.
EXTENSION HANDLE—18" extra leverage..... \$10.00
QUIK-LOK CLAMP with one clamping block..... \$65.00

DI-ACRO BENDER No. 4

Code—DILEV 395.00

Material Capacity..... 1" round steel bar
Radius Capacity 12"..... Height of Forming Nose 1 1/2"
Weight—Net 230 lbs. Shipping—295 lbs. Export—330 lbs.
QUIK-LOK CLAMP with one clamping block..... \$75.00

DI-ACRO BENDER STAND

52.50

Available for all size Di-Acro Benders.
State Model number when ordering.
Working height with Bender mounted..... 38"
Weight—Net 95 lbs. Shipping—100 lbs. Export—125 lbs.

DI-ACRO SPRING WINDER

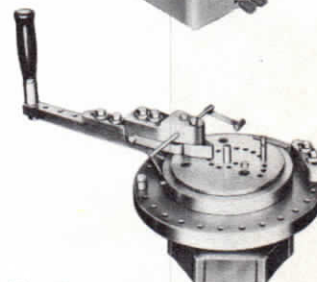
Code—DIWI 85.00

Complete with Six Arbors

Material Capacity..... to 1/8" diameter wire
Maximum Spring Diameter..... 1 1/2"
Weight—Net 30 lbs. Shipping—33 lbs. Export—37 lbs.



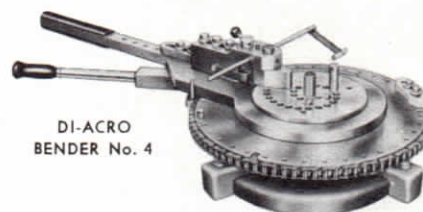
DI-ACRO
HYDRO-POWER
BENDER No. 6



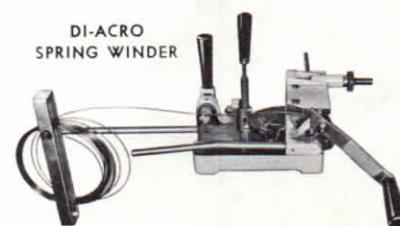
DI-ACRO
BENDER No. 1A



DI-ACRO
BENDER STAND



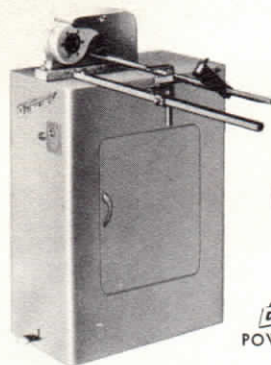
DI-ACRO
BENDER No. 4



DI-ACRO
SPRING WINDER

Quotations and specifications subject to change without notice—Net F.O.B. Lake City, Minn., U.S.A.

DI-ACRO PRECISION MACHINES



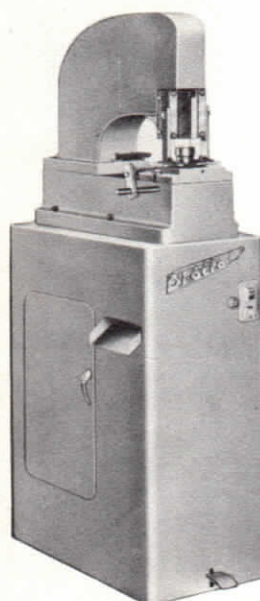
DI-ACRO
ROD PARTER No. 1



DI-ACRO ROD PARTER No. 1 Code—DICUT ... \$ 90.00
Complete with Ejectomatic Gauge
Maximum Capacity..... $\frac{3}{8}$ " round steel bar
Weight—Net 25 lbs. Shipping—30 lbs. Export—35 lbs.

DI-ACRO ROD PARTER No. 2 Code—DIBAR ... 135.00
Complete with Ejectomatic Gauge
Maximum Capacity..... $\frac{5}{8}$ " round steel bar
Weight—Net 60 lbs. Shipping—75 lbs. Export—80 lbs.

DI-ACRO POWER PARTER Code—DIAIR ... 515.00
Complete with All Electrical Equipment and Power
Operated Ejectomatic Gauge
Maximum Capacity..... $\frac{5}{8}$ " round steel bar
Strokes per minute.....180
Standard Motor (Optional—110-220 Volt A.C. Single
Phase, 220-440 Volt A.C. 3 Phase..... $\frac{1}{2}$ H.P.)
Weight, Net 450 lbs. Shipping, 500 lbs. Export, 550 lbs.
MICRO-MATIC GAUGE for automatic cutting action \$95.00
MATERIAL STOCK STAND\$45.00



DI-ACRO
PUNCH PRESS No. 2



POWER PUNCH PRESS
No. 2

* **DI-ACRO PUNCH PRESS No. 1** Code—DIPUN ... \$195.00
Depth of throat..... $6\frac{1}{4}$ " Capacity.....4 tons
Weight, Net 170 lbs. Shipping, 185 lbs. Export, 200 lbs.

DI-ACRO PUNCH PRESS STAND No. 1\$55.00
Weight, Net 95 lbs. Shipping, 100 lbs. Export, 140 lbs.

* **DI-ACRO PUNCH PRESS No. 2** Code—DIHOL ... 265.00
Depth of throat..... $12\frac{1}{4}$ " Capacity.....4 tons
Weight, Net 340 lbs. Shipping, 385 lbs. Export, 415 lbs.

DI-ACRO PUNCH PRESS STAND No. 2\$57.50
Weight, Net 125 lbs. Shipping, 135 lbs. Export, 175 lbs.

* **DI-ACRO POWER PUNCH PRESS No. 1** 625.00
Complete with Di-Acro Power Unit Code—DIRES
Depth of throat..... $6\frac{1}{4}$ " Capacity.....5 tons
Weight, Net 590 lbs. Shipping, 700 lbs. Export, 790 lbs.

DI-ACRO PUNCH PRESS No. 1
For mounting on Di-Acro Power Unit.....\$195.00

* **DI-ACRO POWER PUNCH PRESS No. 2** 695.00
Complete with Di-Acro Power Unit Code—DIPOW
Depth of throat..... $12\frac{1}{4}$ " Capacity.....5 tons
Weight, Net 770 lbs. Shipping, 890 lbs. Export, 990 lbs.

DI-ACRO PUNCH PRESS No. 2
For mounting on Di-Acro Power Unit.....\$265.00

ROLLER CAM AND HANDLE 45.00
For manual operation of Di-Acro Power Punch
Press No. 1 and No. 2, also Di-Acro Power Notcher
*Std. Equipment includes Punch Holder, one Die Holder



DI-ACRO
NOTCHER



DI-ACRO NOTCHER Code—DINOT ... \$225.00
Maximum 90 degree notch in one operation...6" x 6"
Material Capacity.....16 gauge sheet steel
Weight, Net 125 lbs. Shipping, 150 lbs. Export, 170 lbs.

HIGH CARBON-HIGH CHROME BLADES, extra when in-
stalled instead of Alloy Steel Blades.....\$20.00

DI-ACRO NOTCHER STAND\$55.00
Weight, Net 90 lbs. Shipping, 100 lbs. Export, 140 lbs.

DI-ACRO POWER NOTCHER Code—DIWER ... 655.00
Complete with Di-Acro Power Unit
Maximum 90 degree notch in one operation...6" x 6"
Material Capacity.....16 gauge sheet steel
Weight, Net 490 lbs. Shipping, 540 lbs. Export, 590 lbs.

DI-ACRO NOTCHER
For mounting on Di-Acro Power Unit.....\$225.00

HIGH CARBON-HIGH CHROME BLADES, extra when in-
stalled instead of Alloy Steel Blades.....\$20.00

ROLLER CAM AND HANDLE 45.00
For manual operation of Di-Acro Power Notcher, also
Di-Acro Power Punch Press No. 1 and 2.

NOTCHER BLADES ONLY
Alloy Tool Steel (per set)\$35.00
High Carbon-High Chrome (per set)\$55.00

DI-ACRO PRECISION MACHINES

DI-ACRO VARI-O-SPEED POWERSHEAR

Complete as specified below with electrical equipment and Alloy Tool Steel Blades.....

HIGH CARBON-HIGH CHROME BLADES, extra when installed in place of Alloy Steel Blades

Maximum Shearing Width

Maximum Capacity—Sheet Steel

Strokes per minute (Either speed range optional)

U. S. Vari Drive Motor (Optional 110-220 Volt

A.C. Single Phase or 220-440 Volt A.C. Three

Phase 60 Cycle)

Net Weight

Shipping Weight Crated

Shipping Weight Boxed for Export

No. 12
Code—DI-VAR
\$875.00

No. 24
Code—DI-RIO
\$1155.00

\$20.00

\$35.00

12"

24"

16 gauge

16 gauge

30 to 150

30 to 150

40 to 200

40 to 200

1/2 H. P.

1/2 H. P.

475 lbs.

675 lbs.

550 lbs.

765 lbs.

600 lbs.

825 lbs.

SHEAR BLADES ONLY

Alloy Tool Steel (per set)

High Carbon-High Chrome (per set)

All No. 12 Models

\$25.00

All No. 24 Models

\$40.00

\$45.00

\$75.00

DI-ACRO STANDARD POWERSHEAR

Complete as specified below with electrical equipment and Alloy Tool Steel Blades.....

HIGH CARBON-HIGH CHROME BLADES, extra when installed in place of Alloy Steel Blades...

Maximum Shearing Width

Maximum Capacity—Sheet Steel

Speed of Flywheel

Standard Motor (Optional—110-220 Volt A.C.

Single Phase or 220-440 Volt A.C. Three Phase

60 Cycle)

Net Weight

Shipping Weight Crated

Shipping Weight Boxed for Export

No. 12

Code—DISTA

\$595.00

No. 24

Code—DITAN

\$995.00

\$20.00

\$35.00

12"

24"

16 gauge

16 gauge

180 R.P.M.

1/2 H. P.

3/4 H. P.

510 lbs.

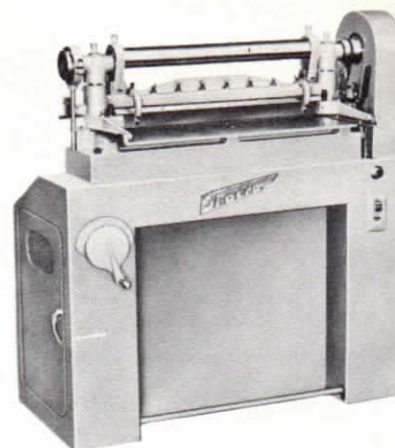
710 lbs.

585 lbs.

800 lbs.

635 lbs.

860 lbs.



DI-ACRO
VARI-O-SPEED
POWERSHEAR No. 24

DI-ACRO SHEAR No. 1

Code—DITOL..... \$ 95.00

Maximum shearing width 6" in 16 gauge sheet steel. (.062").

Weight—Net 35 lbs. Shipping—40 lbs. Export—50 lbs.

DI-ACRO SHEAR No. 2

Code—DISAV..... 185.00

(Similar to Di-Acro Shear No. 3 illustrated at right)

Maximum shearing width 9" in 16 gauge sheet steel. (.062")

Weight—Net 80 lbs. Shipping—95 lbs. Export—105 lbs.

DI-ACRO SHEAR STAND No. 2.....\$55.00

DI-ACRO SHEAR No. 3

Code—DIELM..... 245.00

Maximum shearing width 12" in 16 gauge sheet steel (.062").

Weight—Net 135 lbs. Shipping—150 lbs. Export—170 lbs.

HIGH CARBON-HIGH CHROME BLADES, extra when installed

in place of Alloy Steel Blades

.....\$20.00

SHEAR BLADES ONLY

Alloy Tool Steel (per set)

High Carbon-High Chrome (per set)

SHEAR HOLD-DOWN BAR NO. 3.....\$45.00

DI-ACRO SHEAR STAND No. 3.....\$60.00

DI-ACRO SHEAR No. 4

Code—DILIK..... 350.00

Maximum shearing width 24" in 16 gauge sheet steel. (.062").

Weight—Net 260 lbs. Shipping—300 lbs. Export—340 lbs.

HIGH CARBON-HIGH CHROME BLADES, extra when installed

in place of Alloy Steel Blades

.....\$35.00

SHEAR BLADES ONLY

Alloy Tool Steel (per set)

High Carbon-High Chrome (per set)

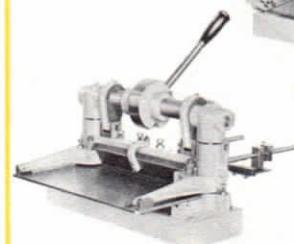
SHEAR HOLD-DOWN BAR NO. 4.....\$55.00

DI-ACRO SHEAR STAND No. 4.....\$65.00

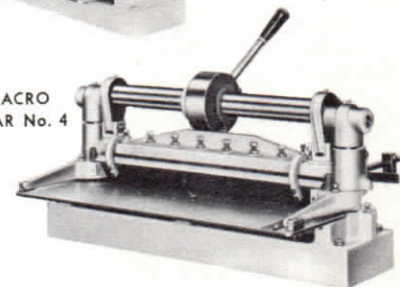
DI-ACRO
SHEAR No. 1



DI-ACRO
SHEAR No. 3



DI-ACRO
SHEAR No. 4



DI-ACRO ROLLER

	No. 1	No. 2	No. 2A	No. 3	No. 4	No. 5	No. 6	No. 7
Maximum Forming Width.	6"	12"	12"	18"	24"	30"	36"	42"
Material Capacity—Steel...	16 ga.	22 ga.	16 ga.	18 ga.	20 ga.	22 ga.	22 ga.	24 ga.
Diameter of Rolls	1"	1"	2"	2"	2"	2"	2"	2"
Minimum Radius.	1/2"	1/2"	1"	1"	1"	1"	1"	1"
Maximum Radius.	No limit on all models							
Weight, Net Lbs.	40	50	100	135	175	225	275	325
Weight, Shipping, Lbs.	45	55	120	165	210	265	310	360
Weight, Export, Lbs.	55	70	130	180	225	280	330	380
Cost	\$110	\$140	\$180	\$215	\$250	\$285	\$320	\$355
Di-Acro Roller Stand	\$ 55	\$ 55	\$ 55	\$ 60	\$ 65	\$ 65	\$ 70	\$ 70

DI-ACRO
ROLLER No. 2



DI-ACRO PRECISION MACHINES



DI-ACRO
STANDARD BRAKE
with Standard Gauge

DI-ACRO STANDARD BRAKE No. 1 Code—DIKRO \$ 95.00

Maximum Forming Width	6"
Maximum Material Capacity	16 gauge steel
Weight—Net 50 lbs. Shipping, 55 lbs. Export, 65 lbs.	
Box Finger Bar Complete—2" Depth	\$35.00
Open End Finger	\$15.00
Acute Angle Bar—150°—18 gauge capacity	\$16.00
Block Mounting Bar	\$10.00
Adjustomatic Gauge	\$15.00

DI-ACRO STANDARD BRAKE No. 2 Code—DIFOR 165.00

Maximum Forming Width	12"
Maximum Material Capacity	16 gauge steel
Weight—Net 100 lbs. Shipping, 120 lbs. Export, 130 lbs.	
Box Finger Bar Complete—2½" Depth	\$50.00
Open End Finger	\$20.00
Acute Angle Bar—150°—18 gauge capacity	\$25.00
Block Mounting Bar	\$15.00
Adjustomatic Gauge	\$15.00
DI-ACRO BRAKE STAND No. 2	\$60.00

DI-ACRO STANDARD BRAKE No. 3 Code—DITRU 235.00

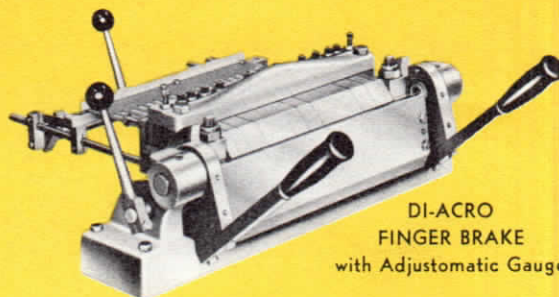
Maximum Forming Width	18"
Maximum Material Capacity	16 gauge steel
Weight—Net 195 lbs. Shipping, 225 lbs. Export, 240 lbs.	
Box Finger Bar Complete—2½" Depth	\$70.00
Open End Finger	\$20.00
Acute Angle Bar—150°—18 gauge capacity	\$35.00
Block Mounting Bar	\$20.00
Adjustomatic Gauge	\$20.00
DI-ACRO BRAKE STAND No. 3	\$65.00

DI-ACRO STANDARD BRAKE No. 4 Code—DICAP 285.00

Maximum Forming Width	24"
Maximum Material Capacity	16 gauge steel
Weight—Net 275 lbs. Shipping, 325 lbs. Export, 325 lbs.	
Box Finger Bar Complete—3" Depth	\$85.00
Open End Finger	\$27.50
Acute Angle Bar—150°—18 gauge capacity	\$45.00
Block Mounting Bar	\$25.00
Adjustomatic Gauge	\$20.00
DI-ACRO BRAKE STAND No. 4	\$65.00

DI-ACRO RADIUS BRAKE No. 2 Code—DIRAD 235.00

Maximum Forming Width	12"
Maximum Material Capacity	16 gauge steel
Weight—Net 100 lbs. Shipping, 125 lbs. Export, 135 lbs.	
Standard equipment includes heavy top forming bar for sharp "zero radius" bends and choice of any ONE of radius bars listed below.	
Radius Forming Bar A 1/16" and 3/32" radius	\$30.00
Radius Forming Bar B 1/8" and 5/32" radius	\$30.00
Radius Forming Bar C 3/16" and 7/32" radius	\$30.00
Radius Forming Bar D 1/4" and 5/16" radius	\$30.00
Radius Forming Bar E 3/8" and 1/2" radius	\$30.00
Box Finger Bar Complete—2½" Depth	\$50.00
Open End Finger	\$20.00
Acute Angle Bar—150°—18 gauge capacity	\$25.00
Block Mounting Bar	\$15.00
Adjustomatic Gauge	\$15.00
DI-ACRO BRAKE STAND No. 2	\$60.00



DI-ACRO
FINGER BRAKE
with Adjustomatic Gauge

DI-ACRO FINGER BRAKE No. 1 Code—DIBOX \$135.00

Maximum Forming Width	6"
Maximum Material Capacity	16 gauge steel
Weight—Net 55 lbs. Shipping, 70 lbs. Export, 75 lbs.	
Standard Forming Bar	\$10.00
Open End Finger	\$15.00
Acute Angle Bar—150°—18 gauge capacity	\$16.00
Block Mounting Bar	\$10.00
Replacement Box Fingers—Each Size Finger	\$ 3.50

DI-ACRO FINGER BRAKE No. 2 Code—DIFIN 210.00

Maximum Forming Width	12"
Maximum Material Capacity	16 gauge steel
Weight—Net 125 lbs. Shipping, 145 lbs. Export, 155 lbs.	
Standard Forming Bar	\$17.50
Open End Finger	\$20.00
Acute Angle Bar—150°—18 gauge capacity	\$25.00
Block Mounting Bar	\$15.00
Extra Fingers to 1½" Ea. \$3.50	3" Ea. \$ 6.00
DI-ACRO BRAKE STAND No. 2	\$60.00

DI-ACRO FINGER BRAKE No. 3 Code—DIGER 295.00

Maximum Forming Width	18"
Maximum Material Capacity	16 gauge steel
Weight—Net 230 lbs. Shipping, 270 lbs. Export, 275 lbs.	
Standard Forming Bar	\$27.50
Open End Finger	\$20.00
Acute Angle Bar—150°—18 gauge capacity	\$35.00
Block Mounting Bar	\$20.00
Ex. Fingers to 1½" Ea. \$3.50, 3" Ea. \$6.00, 6" Ea. \$10.00	
DI-ACRO BRAKE STAND No. 3	\$65.00

DI-ACRO FINGER BRAKE No. 4 Code—DIEND 350.00

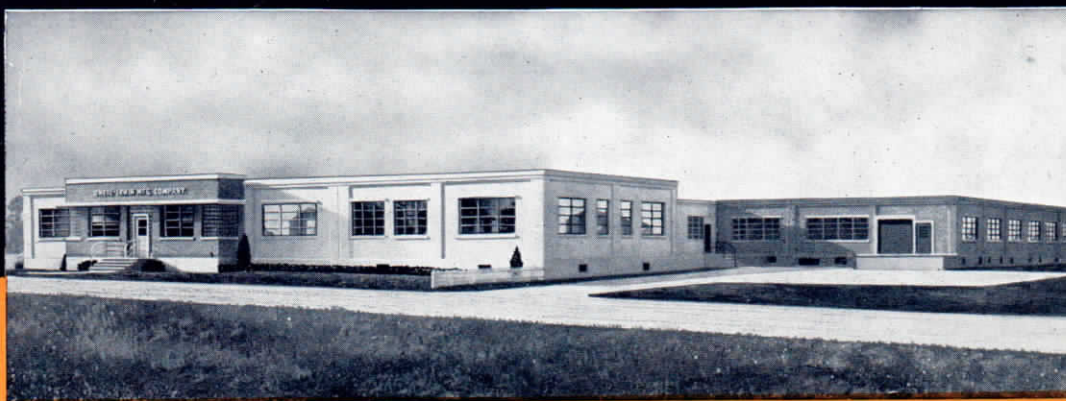
Maximum Forming Width	24"
Maximum Material Capacity	16 gauge steel
Weight—Net 330 lbs. Shipping, 380 lbs. Export, 380 lbs.	
Standard Forming Bar	\$32.50
Open End Finger	\$27.50
Acute Angle Bar—150°—18 gauge capacity	\$45.00
Block Mounting Bar	\$25.00
Ex. Fingers to 1½" Ea. \$3.50, 3" Ea. \$6.00, 6" Ea. \$10.00	
DI-ACRO BRAKE STAND No. 4	\$65.00

DI-ACRO RADIUS BRAKE No. 4 Code—DIRUS 360.00

Maximum Forming Width	24"
Maximum Material Capacity	16 gauge steel
Weight—Net 290 lbs. Shipping, 340 lbs. Export, 340 lbs.	
Standard equipment includes heavy top forming bar for sharp "zero radius" bends and choice of any ONE of radius bars listed below.	
Radius Forming Bar A 1/16" and 3/32" radius	\$45.00
Radius Forming Bar B 1/8" and 5/32" radius	\$45.00
Radius Forming Bar C 3/16" and 7/32" radius	\$45.00
Radius Forming Bar D 1/4" and 5/16" radius	\$45.00
Radius Forming Bar E 3/8" and 1/2" radius	\$45.00
Box Finger Bar Complete—3" Depth	\$85.00
Open End Finger	\$27.50
Acute Angle Bar—150°—18 gauge capacity	\$45.00
Block Mounting Bar	\$25.00
Adjustomatic Gauge	\$20.00
DI-ACRO BRAKE STAND No. 4	\$65.00

TERMS—Open account, 30 days net. Confirmation and delivery of orders subject to approved credit.

EXPORT—Packing charge \$1.50 each. No. 1 size machine \$4.00, larger sizes \$25.00 all Power Machines.



Home of DI-ACRO Precision Machines in the beautiful Hiawatha Valley.



THE DI-ACRO WARRANTY

Di-Acro Precision Machines are manufactured from the highest quality materials with the finest standards of workmanship. They are guaranteed for one full year and any parts found defective during this warranty period will be replaced free of charge.

In addition to this liberal policy we feel a moral obligation to our customers that goes far beyond the provisions of our warranty. We invite you to call to our attention any problems you might have with Di-Acro Equipment.

O'NEIL-IRWIN MANUFACTURING COMPANY • LAKE CITY, MINNESOTA, U. S. A.



POWER EQUIPMENT

for high speed Die-less Duplicating

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