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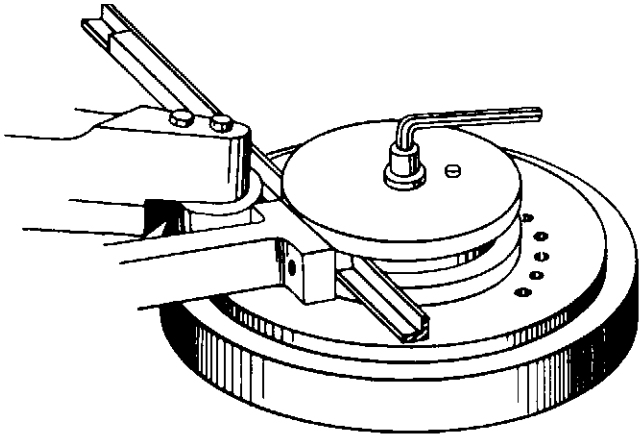
330-455-1942

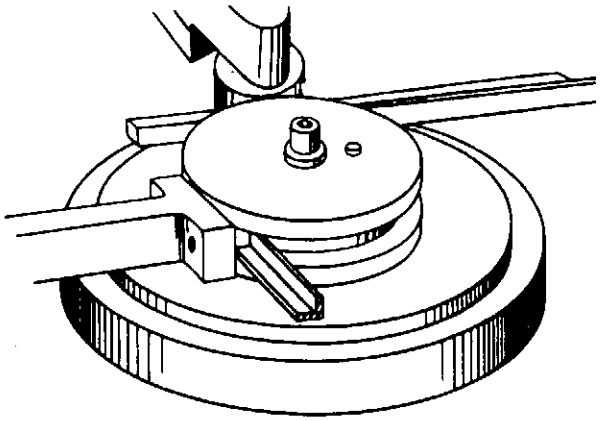
ANGLE BENDING

Although angle with “flange out” can be readily formed with Di-Acro Benders, this type of bending presents a problem in that stresses and strains set up within the material often cause it to twist out of plane after it has been formed. The twisting is generally more pronounced in fabricated angle than in standard mill rolled angle. When the flange bent edgewise is less than half the width of the vertical flange, tendency to twist is greatly reduced. As the dimensions of angle and radius of bend vary with almost every requirement, it is impractical to offer a standard group of accessories for this type of forming. It is suggested that the user prepare these parts and the cross-section view in Figure 4 below, as well as the prints on page 13 which cover all edgewise bending, are given as a guide. Flange should be closely confined in Radius Collar as .002” or .003” variation in clearance can make a great difference in quality of bend. Clearance is increasingly important in thinner materials.

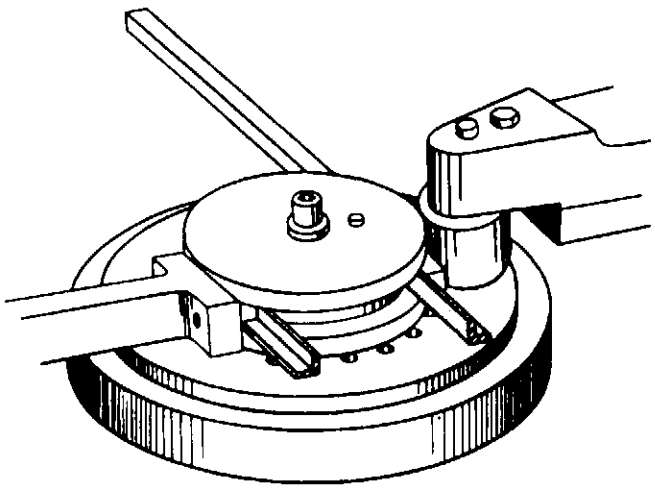
Flanges Out



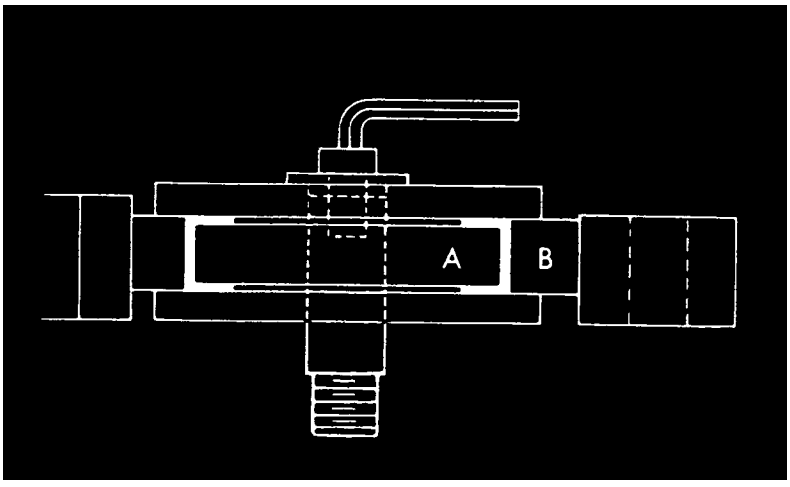
1. Position material in Radius Collar, insert Follow Block and tighten center bolt.



2. Clamp angle tightly. Advance Operating Arm with steady even pressure until it strikes Angle Stop.



3. Loosen center bolt, release clamp, and slide material out of Radius Collar. Remove Follow Block.



4. Cross-section views shows how Radius Collar supports material. By changing size of spacer “A” in Radius Collar and Follow Block “B”, different sizes of angle can be formed.

ANGLE BENDING

When bending angle with the “flange in”, the same problems are encountered as when it is formed with the “flange out”, although in either case any twist which develops can be removed in additional hand or press operation. Since it is necessary to compress the flange as it is bent inward the operation shown below requires considerably more bending pressure than when forming with the “flange out” and it is recommended that the largest possible radius be used to allow for compression of the material. A sharp 90° bend can be formed in angle by first notching the horizontal flange, placing it on top of a Zero Radius Block and then forming the vertical flange in the same manner as shown on page 5. Angle can be formed to a complete circle by following the procedure outlined on page 4. Accessories similar to those illustrated below in Figure 4 should be used so that when the bend is completed the top section of the Radius collar can be removed to release the finished part.

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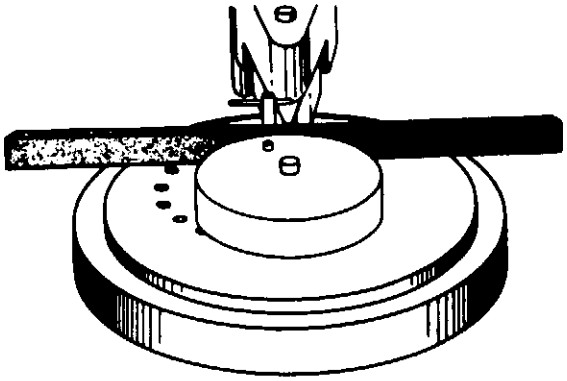
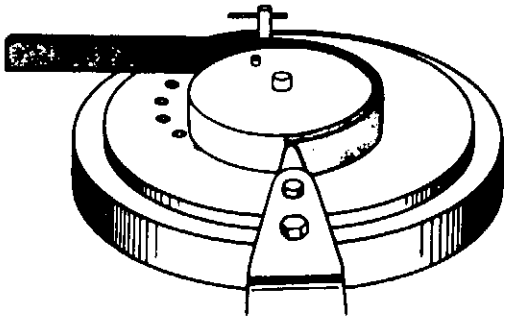
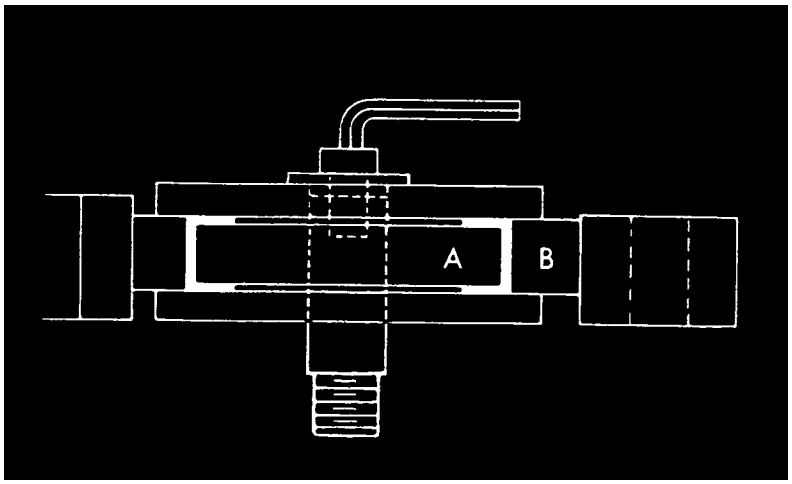
Flanges In



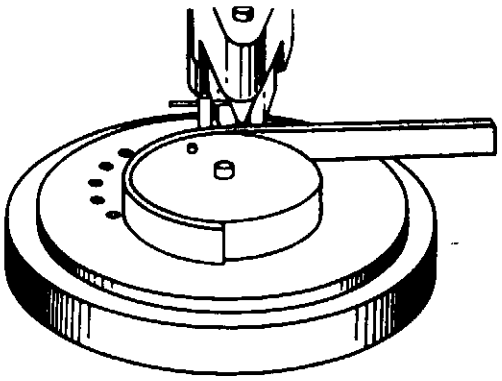
1. Insert material in slot in Radius Collar, positioning Follow Block between angle and Forming Roller and tighten center bolt.



2. Clamp angle tightly. Advance Operating Arm with steady even pressure until it strikes Angle Stop.



4. Cross-section view shows how Radius Collar supports material. By changing size of spacer “A” in Radius Collar and Follow Block “B”, different sizes of angle can be formed.



3. Loosen center bolt, release clamp, remove Follow Block and slide material out of Radius Collar.

SPECIAL SHAPED MATERIAL

All ductile materials, of any shape that can be supported or confined in the bending rolls, can be readily formed with Di-Acro Benders. The illustrations below show how the radius Collar and Forming Roller can be shaped to exactly fit the contour of the material to support its cross section during the bending operation. When the shape of the material is such that it cannot be supported, it can often be successfully formed by first filling it or imbedding the entire part in Cerrobend or some other commercial filler as illustrated in Figure 4.

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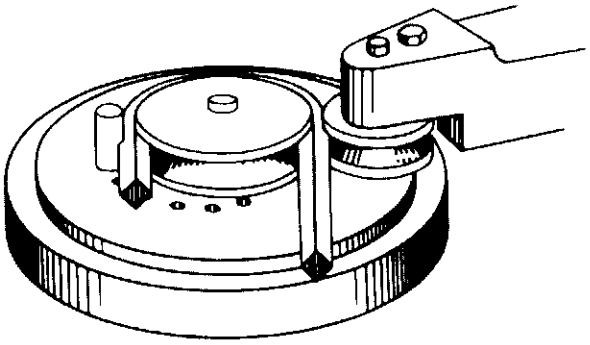
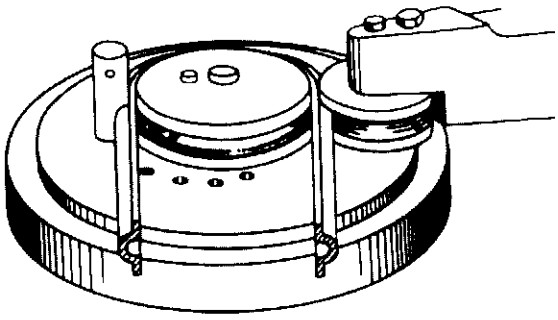
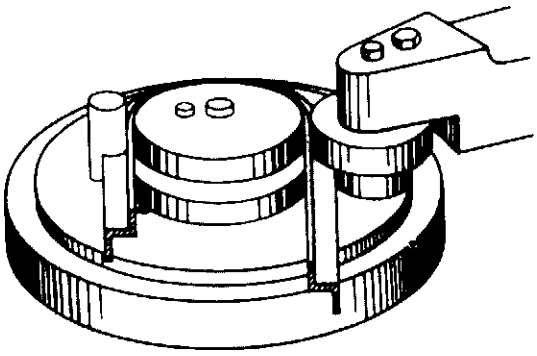


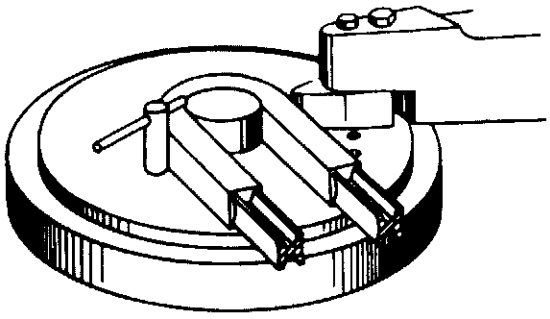
1. To form square material on edge it is only necessary to machine a 90° V groove in the Radius Collar and Forming Roller to eliminate twisting or marking of the material.



2. A convex shape has been turned on the Radius Collar while a concave groove has been machined in the Forming Roller to adequately support the contour of this extrusion.



3. By turning shoulders on both the Radius collar and Forming Roller it is possible to apply bending pressure against both vertical legs of this part and also confine the horizontal member which must be shaped to fit the material.



4. The contour of this aluminum extrusion cannot be supported or confined and has therefore been entirely imbedded in Cerrobend and formed as though it were a solid bar. As Cerrobend melts at 158°, it can be removed after the part is formed by merely placing the piece in hot water.

WIDE MATERIAL BENDING

Although each size Di-Acro Bender has a maximum width capacity determined by the height of the standard Forming Nose, it is possible to form much wider materials by following the various suggestions given below. The simplest method of increasing the material width capacity of Di-Acro Benders is by using the built-up Forming Nose. As the actual width capacity of Di-Acro Benders is unlimited, the illustrations below are offered as a guide with the type and thickness of the material determining the set-up most practical for a particular operation.

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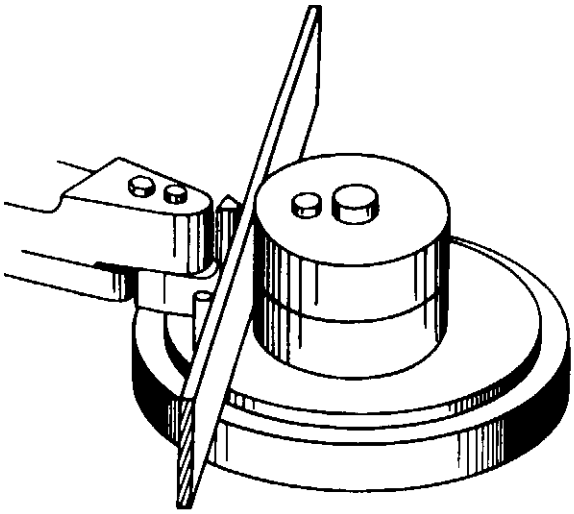
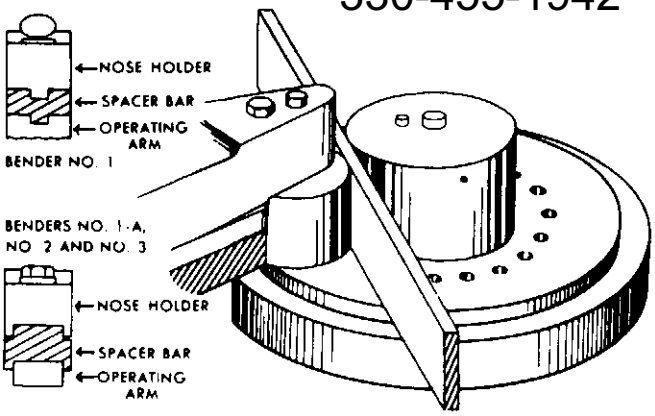
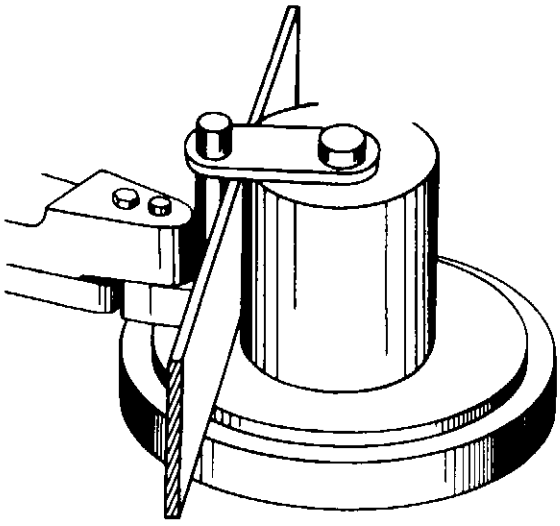
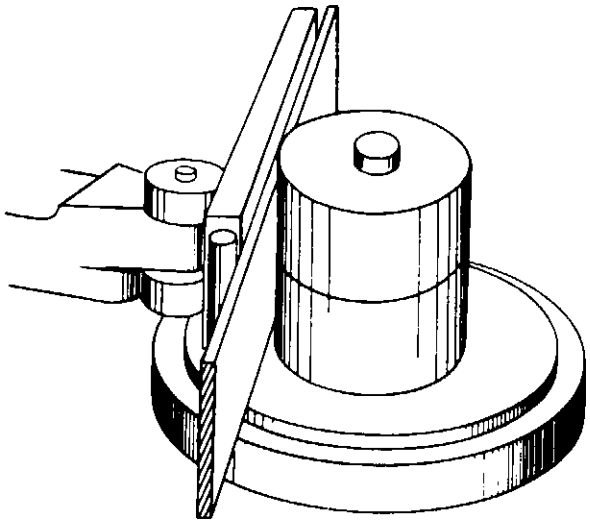


1. The built-up Forming Nose illustrated above is available for all models of Di-Acro Benders. Two or more standard radius Collars of the same size can also be placed on top of each other to provide the required height.





3. When forming very wide or heavy materials the Forming Nose and Radius Collar should be linked together as shown above to maintain rigidity and assure the same radius over the entire width of the part. The Locking Pin should also be linked to the Radius Collar.



4. By using a longer Bearing Pin that extends above the top of the Nose Holder, a second Roller can be used to apply pressure against a wide Follow Block as illustrated. Heavy materials can often be formed by using double rollers without a Follow Block.

DI-ACRO BENDER NO. 1
Although it is the "midget" of the DI-ACRO Bender family, this precision machine is a high speed production unit for all materials within its range. Small parts can often be formed at rates in excess of 750 bends per hour. Weighing only 22 pounds, it has a material capacity of 3/16" round steel bar and 5/16" diameter steel tubing. Radius Capacity 2".

DI-ACRO BENDER NO. 1A
This model is ideal for forming large radius bends in the lighter weight materials as it can be operated at practically the same speed at the smaller No. 1 size Bender. It has a material capacity of 5/16" round steel bar and 1/2" diameter steel tubing. Radius Capacity 6". Net weight 55 pounds.

DI-ACRO BENDER NO. 2
For many years this has been the most poplular DI-ACRO Bender for the heavier operations. Its rugged construction assures continuous day in and day out production in materials as heavy as 1/2" round steel bar and 3/4" diameter steel tubing. Although produciton varies with different jobs and materials it is not unusual to obtain 200 to 250 bends per hour with this unit. Radius Capacity 9". Net Weight 130 pounds.

DI-ACRO BENDER NO. 3
Primarily designed for large radius bends in heavy materials, this model is continually gaining in popularity because of its wide range of application. Torrington Roller Bearings in the main pivot assure maximum output with minimum effort. Capacity — 5/8" round steel bar — 1" diameter steel tubing. Radius Capacity 12". Net Weight 215 pounds.

DI-ACRO BENDER NO. 4
The new DI-ACRO Bender No. 4 is ideal for bending the heavier materials where high speed production is not a factor as its ratchet lever greatly multiplies the operators efforts. It can also be operated by direct drive for the lighter materials. Capacity — 1" round steel bar — 1-1/2" diameter steel tubing. Radius Capacity 12". — Net Weight 240 pounds.

Specifications					
Di-Acro BENDER	**No. 1**	**No. 1A**	**No. 2**	**No. 3**	**No. 4**
Radius Capacity	2"	6"	9"	12"	12"
Height of Std. Forming Nose	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"
Weight - Net	22 lbs.	55 lbs.	140 lbs.	215 lbs.	250 lbs.
Material Capacities	**No. 1**	**No. 1A**	**No. 2**	**No. 3**	**No. 4**
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			3/8" I.D.	1/2" I.D.	1" I.D.
Flat Steel Bar (Bent Flat)	1/8"x3/4"	3/16"x1"	1/4"x1-1/2"	1/4"x2"	3/8"x4"
Flat Steel Bar (Edgewise)	1/16"x1/2"	1/8"x1/2"	1/8"x3/4"	1/8"x1"	1/4"x1"
Angle	1/16"x1/2"x1/2"	1/8"x1/2"x1/2"	1/8"x3/4"x3/4"	1/8"x1"x1"	3/16"x1"x1"
Channel	1/16"x1/4"x1/2"	1/16"x1/2"x1/2"	1/8"x3/8"x3/4"	1/8"x1/2"x1"	3/16"x1/2"x1"

"CRUSH BENDING" ROUND AND SQUARE TUBING WITH DI-ACRO BENDERS

Often times, the bending of thin wall aluminum, mild steel and other tubing with both square and round shapes presents a problem because of the tight radius of bend which is desired with relationship to both the outside diameter and the wall thickness of the tubing.
If it is not necessary to have the formed section of tubing the same size as the straight length, the tubing can be purposely distorted during bending by using special tooling which allows a controlled "crush" of the metal on the inside radius.
Where "crush" bends are satisfactory, from the standpoint of both design and appearance, the customer often saves the cost of purchasing expensive mandrel equipped benders.
All costs for "crush" bend tooling are quoted on special request. Blueprints and samples of the material must be furnished when quotation is desired. Prompt recommendations can be made.

QUICK-RELEASE, CRUSH BEND TOOLING

Increase your crush bend production with "Quick-Release, Crush Bend Tooling." The cam lever arrangement makes it possible by instantly releasing the material without an additional wrench when disengaging the three piece collar.

Specifications You Must Supply on Tube Bending Applications

1. Type of tubing — mild steel, stainless, copper, aluminum, etc?
2. Hardness of the material — is it soft, half-hard, hard?
3. Outside diameter of each size of tubing you wish to bend.
4. Wall thickness of each size of tubing.
5. Centerline radius of each bend that you want to make. For example, if you are bending 5/16 inch O.D. copper tube with .049 inch wall thickness to a 3/4 inch centerline radius, this should be stated.
6. Degree or angle of bend.
7. Production required — how many bends do you expect per hour? Also, is this a short-run or a long-run production job that is liable to be repeated several times during the year?

It is best to provide blueprints of each bending job you wish to perform where there may be doubt about the ability of the equipment to do the job. In the absence of blueprints, complete dimensioned sketches will be satifactory. Here is a rough rule of thumb to follow in tube bending — you cannot bend to a radius less than 2-1/2 times the oustside diameter of the tubing without the use of an inside support or mandrel. Mandrel applications are more costly and nearly always involve power operated machines.

BENDER TOOLING

SPECIAL TOOLING FOR YOUR SPECIAL BENDING NEEDS

When you have a bending problem in production or design, Di-Acro can aid you at no obligation. Just send blueprints, dimensioned sketches, or the part you wish to produce to our Applications Engineering Department and your plans will receive prompt attention.
Special tooling? Here is some tooling we have available: Crush-bend tooling, automatic follow-bar return, wiper dies and ball mandrels for thin-walled tight radius tube bending, power clamping for high speed application, pneumatic mandrel extractor.

SPRING BACK - When determining the size of the Radius Pin or Collar, spring-back should be compensated for. A frequent way is by overbending slightly beyond the required angle. After the amount of spring-back has been determined, the Angle Gauge can be set so that all bends will be duplicated. In addition to overbending, it may be necessary, in some cases, to form the material around a Radius Pin or Radius Collar of smaller radius than the desired bend. The actual size of th Radius Pin or Collar can best be determined by experiment for the material and conditions.

FORMING ROLLER - To eliminate work marking and reduce operator effort, it is often desirable to replace the Forming Nose (furnished as standard equipment), with a Forming Roller.

BUILT-UP FORMING NOSE - This is used to increase the material width range of Di-Acro Benders. Must be used with wider or stacked radius collars.

There are two tube bending methods:
1. The “Forming Roller” method is recommended for (a) all large bends where centerline radius is at least 4 times the outside diameter (O.D.) of the tube, (b) pipe and heavy wall tubing, and (c) very small diameter tubing.
2. The “Follow Block” method, which allows forming thin wall tubing to a centerline radius as small as 2-1/2 times the O.D. without using inside mandrels or fillers.

Guard against spring-back. To prevent the tube form slipping during forming, the Quik-Lok Clamp is recommended, used with Type A Radius Collar. For locking smaller size tubing the Clevis and Swivel Clamps with Type B Radius Collars are used on No. 1 and No. 1A Benders.

PARTS REQUIRED FOR “FORMING ROLLER” BENDING METHOD - Grooved Radius Collar - one for every radius and tube size. - Grooved Forming Roller - one for each tube size only. - Clamp Block - for use with Quik-Lok Clamp on all Di-Acro Benders. One for each tube size.
- Swivel and Clevis Clamps - for No. 1 and No. 1A Benders. One for each tube size.

PARTS REQUIRED FOR “FOLLOW-BLOCK” BENDING METHOD Grooved Radius Collar - one for every radius and tube size. Forming Roller - one covers all “Follow Block” operations. Follow Block - one for each tube size only. Listed length will accommodate a 180 degree bend. Clamp Block - for use with Quik-Lok Clamp on all Di-Acro Benders. One for each tube size. Swivel and Clevis Clamps - for No. 1 and No. 1A Benders. One for each tube size. Style B collars only.

IT'S EASY TO BEND

Increased knowledge of the cold bending of metal and improvements in bending machines during the past decade have opened new horizons in the manufacturing field as many forming operations not considered practical some years ago can now be readily performed.

Technically metal bending is rather involved due to the physical change that occurs within the material during the bending operation and also because the numerous types of alloys available each react differently when formed.

Rather than discuss these technical problems, the purpose of this booklet is to illustrate and describe the multitude of bending operations that can easily be accomplished without special engineering knowledge provided a few elementary principles are observed.

PRODUCT DESIGN

Design of the formed parts in a product generally determines whether or not they can be efficiently and economically produced. Give careful consideration to these suggestions.

Selection of material is of first importance as it must be sufficiently ductile to produce a satisfactory bend of the smallest radius required and still be strong enough to provide the rigidity which the product demands.

It is usually desirable to designate the largest practical radius as this gives wider latitude in choice of material and often assures a better bend in both strength and appearance.

By using the same size material and designating identical radii for each bend whenever possible, the tooling of the bending machine can be simplified and the highest possible production obtained as a number of successive bends can then be progressively made in a part, thereby completing it before it is removed form the machine.

Compound bends or adjacent bends in different planes should be avoided if possible because of confliction that may occur between the bends which might necessitate special tooling. This is especially true in tubing but also holds for solid materials.

Generally the smallest recommended radius for tubing, measured to the exact center of the tube, is 1-1/2 times the outside diameter of the tube provided an inside mandrel is used when bending. This minimum centerline radius should be increased to at least 2-1/2 times the outside diameter of the tube if the bend is to be made without an inside mandrel.

In making a bend near the end of a tube, a straight length equal to at least the diameter of the tube should extend beyond the bend. If a bend is required to the very end of the tube, a straight length should be allowed and trimmed after forming.

SELECTION OF MATERIAL

From the numerous types of material available in tubing, extrusions, mouldings, channel and solid bars, the most suitabel material for produciton of a part can usually be chosen.

In making this selection the ductility of the material should be given prime consideration and before a decison is made a sample should be formed to the smallest required radius or assurance obtained from the supplier that the bend can be satisfactorily made.

Elasticity of the material, which causes it to spring back after it has been bent, must also be considered as it may be impossible to form a closed eye or a complete circle in some alloys.

If tubing is to be bent without an inside mandrel the heaviest practical wall should be used. As a rule, in non-ferrous metals, one quarter to half hard tubing provides best results.

When bending channels, angles, mouldings, and extrusions the centerline radius of the bend should usually be at least three times the width of the flange to be formed edgewise.

CHOICE OF BENDING MACHINE

A number of bending machines are offered on the market today and your choice of the most suitable bender can largely be determined by the range of your bending requirements.

These machines are available in both small and large manually operated models as well as power driven units; some designed for one specific application and others capable of performing a wide variety of operations.

Should your work consist only of one specialized operation such as the bending of thin wall tubing on a high speed basis, obviously a completely automatic bender is the answer.

If, on the other hand, your jobs are so varied that you are called on to form a variety of materials such as tubing, angle, channel, extrusions, mouldings, and bus bars in addition to solid materials, a universal all-purpose bender will best serve your needs.

Oftentimes small parts can be formed faster and cheaper with manually operated benders provided production quantities do not warrant completely automatic equipment.

Careful study of specifications, capacities and working range of the various benders under consideration will enable you to choose the most logical unit for your own operations.

TOOLING THE BENDER

All bending machines merely provide a means of applying power either manually or mechanically to perform the bending operation and supply mountings for the bending tools.

These tools consist of a form or radius collar having the same shape as the desired bend, a clamping block or locking pin that securely grips the material during the bending operation and a forming roller or follow block which moves around the bending form.

When bending materials of open cross section such as tubing, channel, angle and extrusions, the bending form should exactly fit the contour of the material to provide support during ther forming operation. This is also true of the clamping block and forming roller, as only by completely confining the material can a perfect bend be obtained.

Since all metals are somewhat elastic, they will spring back more or less after they are formed and for that reason the bending form must usually have a smaller radius than the required bend. The amount of springback is dependent upon the type of material, its size and hardness, as well as the radius of the bend and it is usually necessary to experiment somewhat to determine the exact size of the bending form.

Bending is no different than any machining operation in that the results obtained will be in direct proportion to the care taken in properly tooling the bender for the job to be done.

MOUNTING THE DI-ACRO BENDER

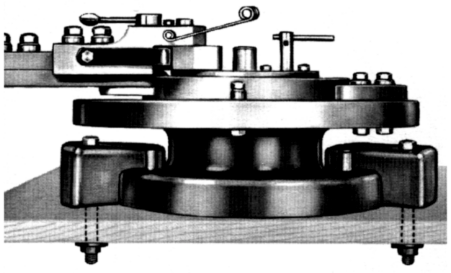
The most practical method of mounting a DI-ACRO Bender depends onthe model of the machine and also the type of operations for which it is to be used.

Both the DI-ACRO Bender No. 1 and No. 1A can be held in a vise as shown in figure 1 below or mounted on a bench as the swing of the Operating Arm requiries only a limited amount of space.

For greatest versatility, DI-ACRO Bender No. 2, No. 3, and No. 4 should be mounted on a stand that has been bolted to the floor in a location which will allow the operator freedom around the entire machine when forming eyes or complete circles.

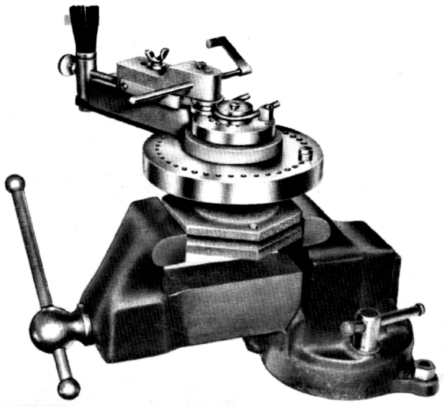
The DI-ACRO Bender Stand shown at the right is ideal for this purpose as its very rugged constrution allows it to withstand extreme bending pressure and its design places the Bender at the most convenient operating height.

If the bends to be made with either of these models are not in excess of 180 degrees, they can be mounted on a bench as provision is made to allwo them to be readily located in the most convenient operating position as illustrated in figure 2.



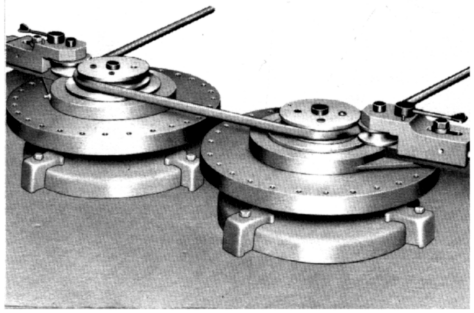
1. VISE MOUNT

The hexagonal shape of the base of the DI-ACRO Bender No. 1 and No. 1A allows these models to be held in a vise in six different positions without tipping. This method of mounting is often desireable when the machines are only used for an occasional job. For continuous production operations, they should usually be bolted to a bench.



2. BENCH OR STAND MOUNT

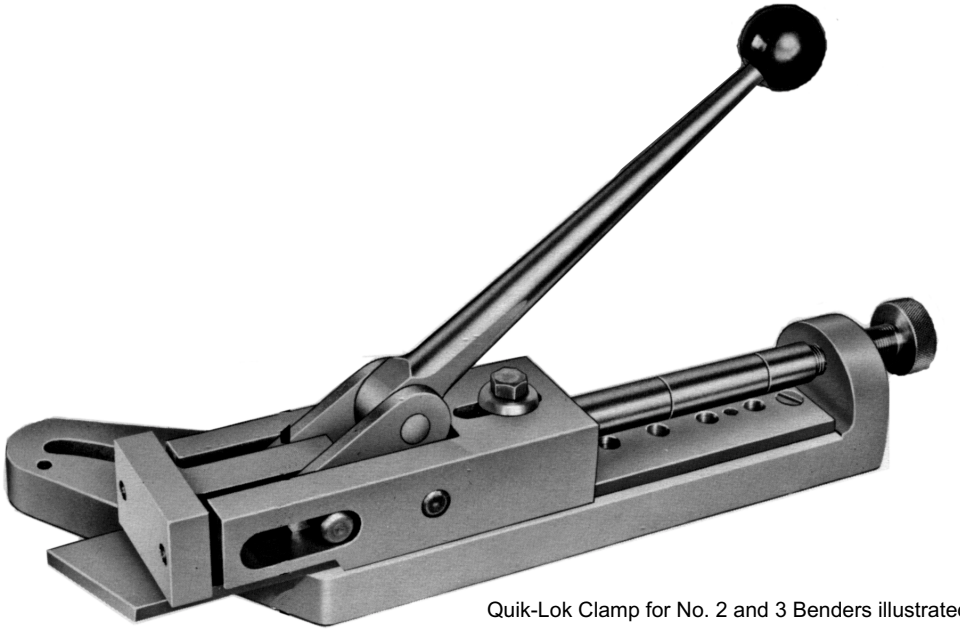
When mounting DI-ACRO Bender No. 2, 3, or 4 on the DI-ACRO Stand or on a bench, the three Hold-down Lugs supplied with the machine should be used as illustrated above. The Bender Base can then be turned to any convenient operating position desired by merely loosening the Lug Bolts and relocating the tow pins shown in the base casting so they will lock against any two of the lugs.



3. DUAL MOUNT

It is sometimes practical to mount two DI-ACRO Benders next to each other on a bench as shown at the left, and by proper spacing between them, produce two bends in a part simultaneously. There is no need for a holding fixture in a set-up of this type since the pressure exerted by the Forming Rollers of each machine prevents the material from slipping or creeping during the bending operation.

QUIK-LOK CLAMP



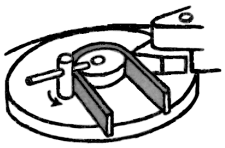
Quik-Lok Clamp for No. 2 and 3 Benders illustrated.

DI-ACRO Quik-Lok Clamp can be mounted on all Benders. This accessory is especially valuable when bending tubing, angle, channel, and extrusions as it locks the material securely and can be instantly released for removal of the formed part.

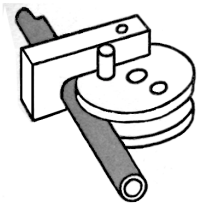
Quik-Lok is easily adjusted for any radius to 9". All Type A Radius Collars for tube forming have been designed for use with Quik-Lok Clamps. When ordering, diameter of the tube to be formed should be specified. Additional Clamp Blocks are offered on page 27 of this manual.

LOCKING FIXTURES

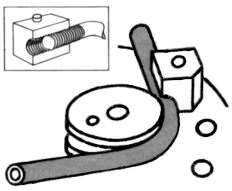
To obtain a perfect bend, the material must not be allowed to slip during the forming operation.
The illustrations on this page suggest various methods of locking the material before bending, however the type of fixture used should be largely determined by the desired production and the amount of slippage encountered.



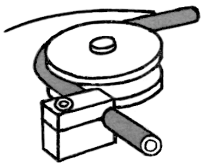
1. STANDARD LOCKING PIN
This cam action Locking Pin is supplied with each DI-ACRO Bender. To lock, turn opposite to bending direction.



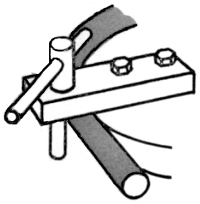
2. CLEVIS TUBE CLAMP
Ideal for clamping light weight tubing for large radius bends with No. 1 and No. 1A Benders.



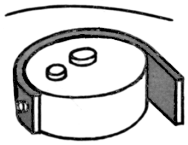
3. SWIVEL TUBE CLAMP
Same as figure 2 at left except for smaller radii. Threads can be cut in clamp to lock threaded bars.



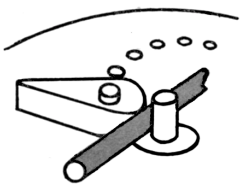
4. SPLIT BLOCK TUBE CLAMP
Practical method of locking tubing if production is not a factor. Mount from Bender Base or Mounting Plate.



5. CAM LOCK FOR LARGE RADII
For large radius bends a Locking Pin can be mounted forma plate bolted to top or bottom of Radius Collar.



6. INSET LOCK PIN
Strip stock can often be held in this manner if there is a hole at one end of material. Eliminates gauging.



7. CAM LOCK FOR SMALL EYES
Cam Lock is suggested when Radius Pin is so small that material cannot be held with standard Locking Pin.

A Universal Bending Machine “Custom-Built” for Every Job

The DI-ACRO Power Bender has been designed to provide a simple, trouble-free hydraulic power unit which will perform not only one or two specialized operations, but all of the multitude of bending jobs which might arise in a metal working plant from day to day.
It is a revolutionary bending machine of virtually universal application, for this ONE standard machine can be easily converted into a “custom-built” unit to exactly fit each forming requirement.
Simple, compound and reverse bends can all be formed with the DI-ACRO Power Bender in tubing, angle, channel, extrusions, moldings, strip stock, bus bars, round or square rods and all other solid ductile materials.
A smooth even flow of power is assured at all times by the Vicker Hydraulic System incorporated in this flexible machine. Correct bending speed for all types of material is at the command of the operator thru a variable flow control valve which allows infinite speed adjustment.
A high daily rate of production is possible with this precision bender as the centralized location of all controls eliminates lost motion on the part of the operator.
Engagement of the control lever starts the bending cycle leaving the operator’s hands free until the bend is completed and the bending motion is automatically stopped. A flick of the lever returns the machines at high speed to loading position, regardless of speed used in bending cycle.
The strudy steel body and all other parts of the DI-ACRO Power Bender have been designed to withstand loads much heavier than they will normally be subjected to with all composnents made to exacting tolerances to assure continuous and lasting accuracy. Both Timken and Torringtion bearings insure many years of trouble-free service.
An Automatic Angle Control is provided which allows a series of bends of varying degrees to be progressively made in a single part without removing the piece from the machine.
Large quantities of identical parts can be accurately duplicated through the use of a Multiple Length Gauge with which the machine is equipped.
Although the normal forming method of this precision bender is drawing the material around a rotating bending form, it will also perform “Compression Bending” by wrapping the material around a stationary form. This latter method is often advantageous when forming channel, molding and extrusions.
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.
It is possible to form two bends simultaneously in one piece by “teaming up” two DI-ACRO Power Benders and the machines can be located to provide bends as close as 18” center to center with no limitation as to the maximum distance between bends.
The DI-ACRO Power Bender can be delivered completely tooled for your job or it can easily be set up in your own plant as your various requirements arise.

DI-ACRO POWER BENDER NO. 6
With Toggle Clamp and Forming Roller

The basic design of the DI-ACRO Power Bender provides a driving spindle on which different set-ups can be easily mounted.

Standard tooling for tube bending is illustrated at right. 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 operations.

Many other ductile materials including solid, round, square and rectangular bars can also be formed with this set-up although the degree of bend is limited to 280 degrees thereby making the Mounting Plate set-up necessary when bending centered and off-center eyes. Tubing can be accurately formed to an inside radius as small as twice the outside diameter of the tube with a minimum of distortions without the use of inside mandrels.

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

TUBE FORMING WITH DI-ACRO POWER BENDER NO. 6

Motor— 220-440 Volt A.C. Three Phase 60 Cycle	3 H.P.
Bending Speed (Other speeds optional)	6 RPM to 12 RPM
Hydraulic Cylinder	3-1/2” Bore*
Hydraulic Pump-Flow Control Valve	Vickers
Radius Capacity (Can be increased)	9”
Hydraulic Pressure	1000 P.S.I.
Floor Space	18” x 54”
Weight-Net	950 lbs.
Crated	1,150 lbs.
Export	1,250 lbs.

*Hydraulic Cylinders larger and smaller are available. Ask for special quotation.

MATERIAL CAPACITY

Steel Tubing - 16 gauge	1-1/4” O.D.
Standard Iron Pipe	3/4” I.P.S.
Flat Steel Bar - edge wise	1/4” x 1”
Angle	1/8” x 1” x 1”
Channel	1/8” x 1/2” x 1”

NOTE: Send samples to our Engineering Department for test and recommendations.

DI-ACRO POWER BENDER NO.8
With Mounting Plate and Forming Nose

The set-up shown at right is similar to the arrangement used so successfully with all DI-ACRO Hand Benders. The material is locked between the radius collar and locking pin and, as the Mounting Plate rotates, the material is drawn past the forming nose or a forming roller which can be used for many operations.

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.

The 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 as or they can be prepared in your plant.

Since the Mounting Plate allows bending a full 360 degrees, it is necessary to use this set-up when forming tubing, angle, channel, mouldings and extrusions in excess of the 280 degree angle range of the Toggle Clamp Set-Up. This can be easily accomplished through the use of the proper accessories.

Motor— 220-440 Volt A.C. Three Phase 60 Cycle	3 H.P.
Bending Speed (Other speeds optional)	6 RPM to 12 RPM
Hydraulic Cylinder	3-1/2" bore*
Hydraulic Pump - Flow Control Valve	Vickers
Radius Capacity (Can be increased)	24"
Hydraulic Pressure	1000 P.S.I.
Floor Space	18" x 54"
Weight- Net	1,000 lbs.
Crated	1200 lbs.
Export	1300 lbs.

*Hydraulic Cylinders larger and smaller are available. Ask for special quotation.

LARGE RADIUS FORMING WITH DI-ACRO POWER BENDER NO. 8
MATERIAL CAPACITY

Standard Iron Pipe*	1-1/4" I.P.S
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 - Bent Edgewise	3/8" x 1"
Other materials same as No. 6 Bender	

NOTE: Send samples to our Engineering Department for test and recommendation.

* Requires cylinder with 4" bore.