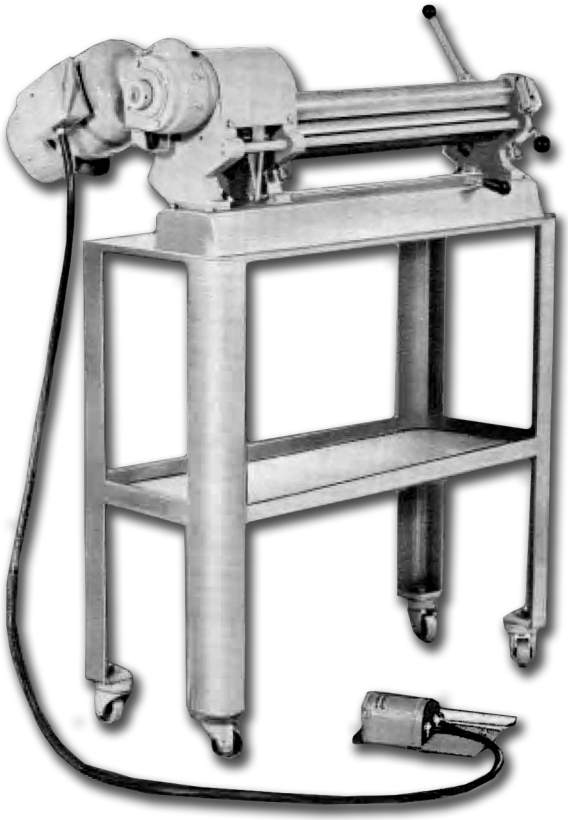
SLIP ROLLERS OPERATIONS MANUAL

Di-Acro No. 24
Power Operated Roller



Di-Acro No. 2A
Hand Operated Roller

METAL FABRICATION EQUIPMENT

579 SCHOMMER DR - STE C

HUDSON, WI 54016

(651)342-1756 (P)

OBSOLETE MACHINE

MANUAL DISCLAIMER

DI-ACRO by supplying this manual is not liable for any indirect, incidental, or consequential damages or injuries sustained or incurred in connection with using the information in any way contained herein.

DI-ACRO accepts no responsibility or liability resulting from attempts to use this information.

DI-ACRO does not vouch for or warrant the accuracy, completeness or usefulness of any information contained herein.

Di-Acro®
METAL FABRICATION EQUIPMENT

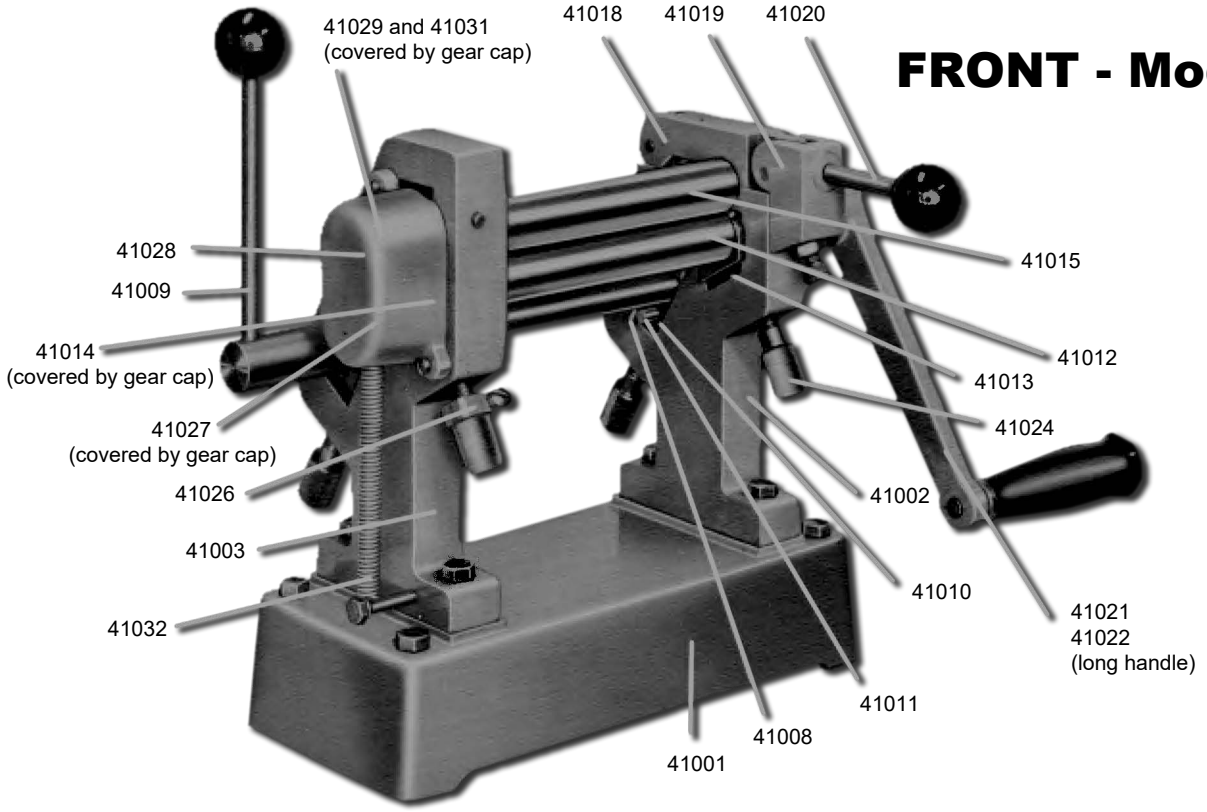
ROLLER MODEL DATA

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 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 roller.

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 preset 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	No. 1	No. 2	No. 2A	No. 3	No. 4	No. 5	No. 6	No. 7
Max Forming Width	6"	12"	12"	18"	24"	30"	36"	42"
Material Capacity – Steel	16 Gauge	22 Gauge	16 Gauge	20 Gauge	20 Gauge	22 Gauge	22 Gauge	24 Gauge
Diameter of Rolls	1"	1"	2"	2"	2"	2"	2"	2"
Minimum Radius	½"	½"	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.

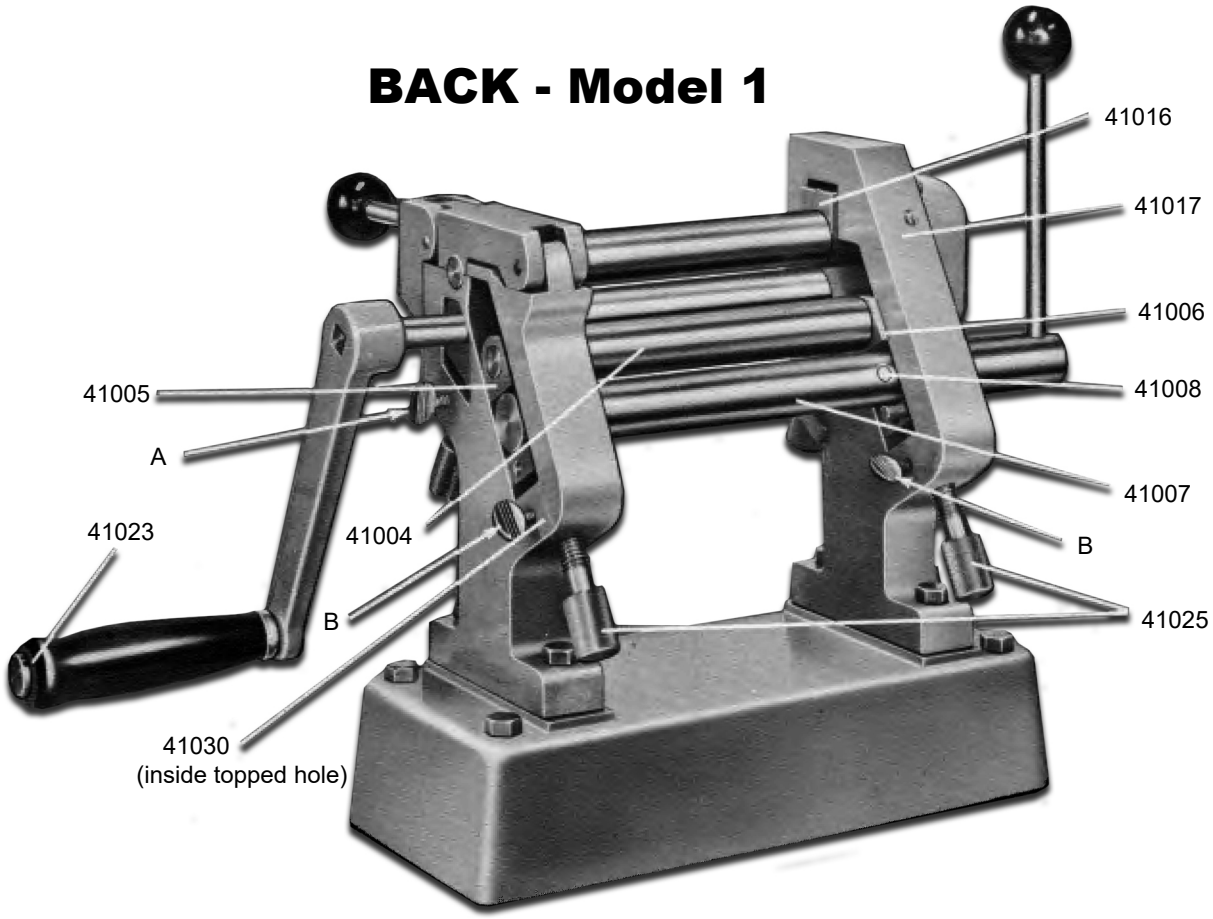


41001 - Base
41002 - Side Frame R
41003 - Side Frame L
41008 - Cam Stop Pins
41009 - Idler Roll Cam Lever
41010 - Cam Blocks
41011 - Cam Block Pins
41012 - Lower Pinch Roll
41013 - Lower Pinch Roll Box R
41014 - Lower Pinch Roll Box L
41015 - Upper Pinch Roll
41018 - Clamp
41019 - Clamp Lock
41020 - Clamp Stud
41021 - Long Handle
41022 - Short Handle
41024 - Adjusting Screws Front
41026 - Adjusting Screw Stop
41027 - Spring Hook
41028 - Gear Cap
41029 - Gear Pins
41031 - Gears
41032 - Pinch Roll Springs

DiAcro®
METAL FABRICATION EQUIPMENT

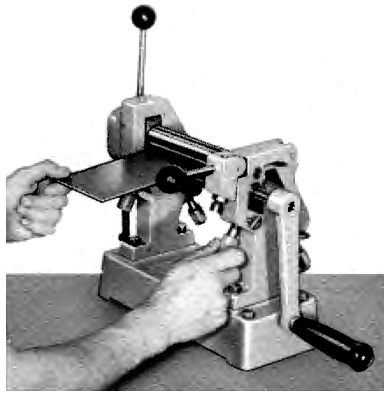
HOW TO FORM CIRCLES

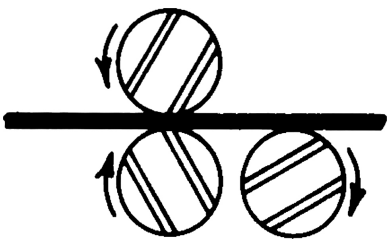
BACK - Model 1



41004 - Idler Roll
41005 - Idler Roll Box R
41006 Idler Roll Box L
41007 - Idler Roll Cam
41006 - Cam Stop Pin
41016 - Pivot Box
41017 - Pivot Pin
41023 - Handle Stud
41025 - Adjusting Screws Rear
41030 - Spacers

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 = πD. C is Circumference. π equals 3.1417. D is Diameter. For example, to find the length of material needed (circumference) to form a circle 4 inches in diameter, multiply 3.1417 by 4". The result is 12.5667 inches in approximate length of material. 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.



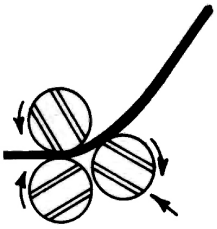


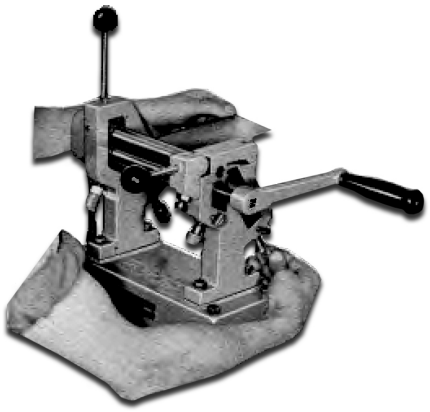
To adjust roller for material thickness - adjust
lower pinch roll for material thickness by turning adjusting screws 41024. Loosen thumb screws A (shown on back photo) on right side of adjusting screws to make this adjustment and tighten them after adjustment has been made. Insert the flat length of material 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.

DiAcro®
METAL FABRICATION EQUIPMENT

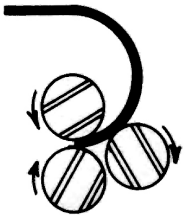
HOW TO FORM CIRCLES

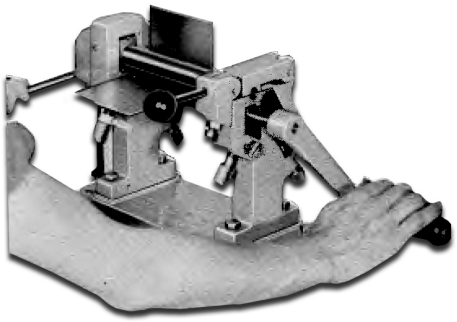
To adjust roller for diameter of circle to be formed - place cam lever 41009 in vertical position. Set idler roll with adjusting screws 41025 on the back of the roller. Thumb screws B (rear photo) must be loosened in order to make adjustment. No exact formula can be followed when making this adjustment because material "spring back" 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 with spiral during the rolling process.



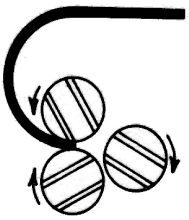


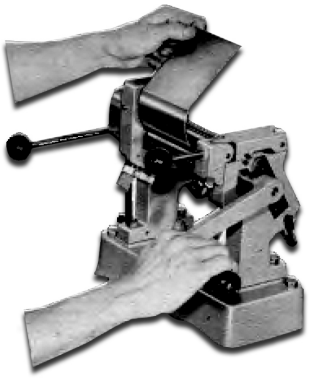
To operate roller - after diameter adjustment has been made - insert material from front of roller and turn operating handle 41021 in a clockwise direction until approximately half the material has passed through the rolls. Then, while still turning, raise the idler roll by pulling the cam lever into 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.



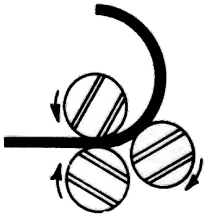


After half circle has been formed, re-insert the formed end of the material into the roller (as illustrated) and turn operating handle - again in a clock-wise direction - to form a complete circle.

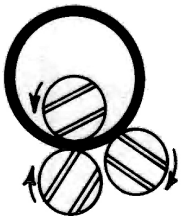


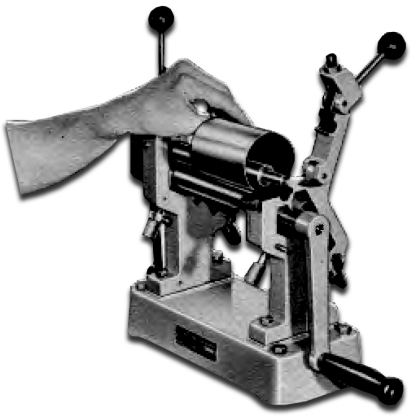


To remove formed part, lift clamp handle 41020, turn adjusting crew stop 41026 to the left to raise upper pinch roll and slide material off roll.

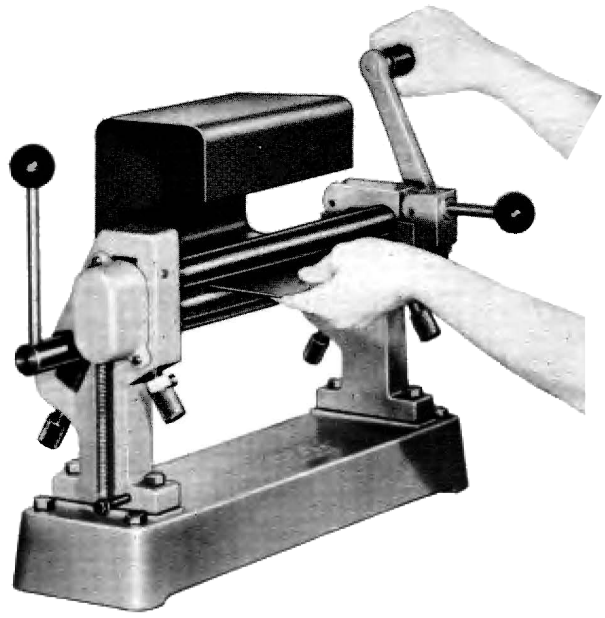


If the material is not long enough or if the formed material is not the proper diameter, additional samples will have to be made. Thousands of identical parts can be precisely duplicated when proper adjustment of the roller has been made.

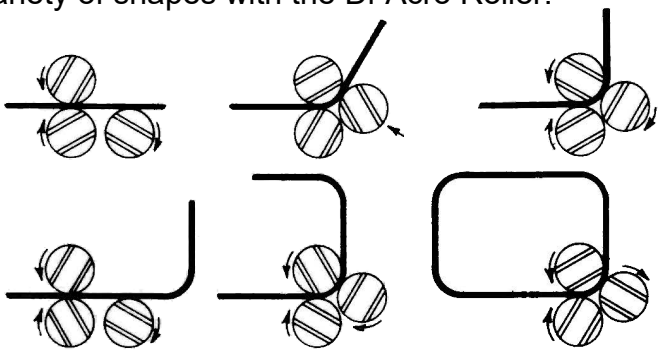




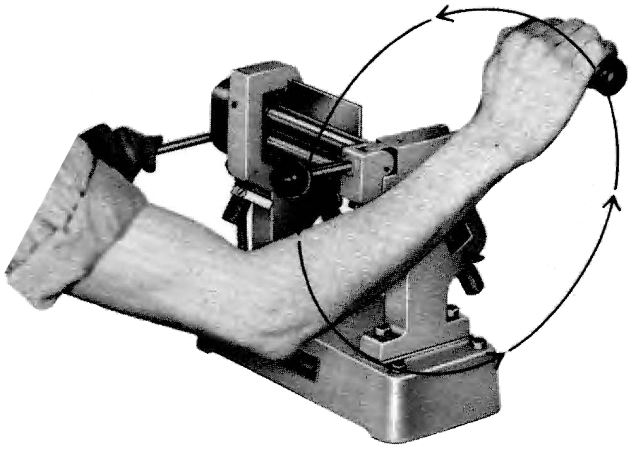
HOW TO FORM CIRCLES



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.



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 instruction on page 4. 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.