

Power Operated Benders • Hand Operated Benders



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POWER BENDER BASE

Power Operated Bender

The Di-Acro Power Bender is a hydraulically operated unit that can be configured for a variety of bending operations. The base machine is capable of accepting both Model 6 and Model 8 Tooling Head Assemblies.

*Shown with optional
#6 Tooling Head Assembly*



- CENTER EYE BENDING
- TUBE BENDING
- CHANNEL BENDING, FLANGES OUT
- EDGEWISE BENDING

A wide range of standard tooling options are available for bending various shapes of tubing, angle, channel as well as flat stock, round stock and round tubing.

Four adjustable stops allow bends with varying degrees to be progressively made. Modernized controls aid operator safety, improve reliability and provide programmable bends as a standard feature.

PLC controlled bending improves reliability, repeatability, and reduces set up time. The new control package includes an ergonomically positioned two-hand safety switch for added operator safety. An encoder and adjustable "home" position proximity switch provides manual/auto selection with a programmable function. Also included is a "real time" bend angle display and parts counter.

The Di-Acro power bender uses the proven and robust rack and pinion design to rotate the tooling head. The head is actuated with the larger, now standard 4" bore cylinder. The self-contained hydraulic power unit with larger 10 gallon reservoir provides additional cooling. A variable volume, pressure-compensated vane pump provides volume control for bending speed. A double solenoid directional valve replaces the manual valve for improved reliability and repeatability.

STANDARD EQUIPMENT

- > Angle control with 4 stops, (not shown).
- > Material length gauge, (not shown).
- > Electrical equipment conforms to JIC Electrical Standards for general purpose machine tools.
- > Hydraulic cylinder -with 4" bore produces 3,500 ft/lbs (4,745 joules) for higher capacity.

SPECIFICATIONS with TOOLING HEAD ASSEMBLY

Model	6 Power	8 Power
Maximum radius capacity w/o Quik-Lok	9" (229mm)	24" (610mm)
Maximum radius capacity with Quik-Lok	9" (229mm)	—
Maximum degree of bend	280°	360°
Hydraulic pressure	1,250 psi (70kg/cm ²)	1,250 psi (70kg/cm ²)
Motor	3 hp.	3 hp.
Wiring (specify)	208, 230, 460 volts, 3 phase, 60 Hz	208, 230, 460 volts, 3 phase, 60 Hz
Torque (4" cylinder)	3,500 ft. lbs. (4745 joules)	3,500 ft. lbs. (4745 joules)
Machine shipping weight	1,150 lbs / 522 kg	1,150 lbs / 522 kg
Material Capabilities		
Round mild steel bar	.625" (16mm)	1" (25.4mm)
Steel tubing – 16 ga.	1.25" OD (32mm)	1.5" OD (38mm)
Standard iron pipe	.75" IPS (14mm)	1" IPS (42mm)
Flat steel bar (easy way)	.25" x 2" (6mm x 51mm)	.375" x 4" (9mm x 101mm)
Flat steel bar (hard way)	.25" x 1" (6mm x 25mm)	.375" x 1" (9mm x 25mm)

NO. 6 BENDER SETUP

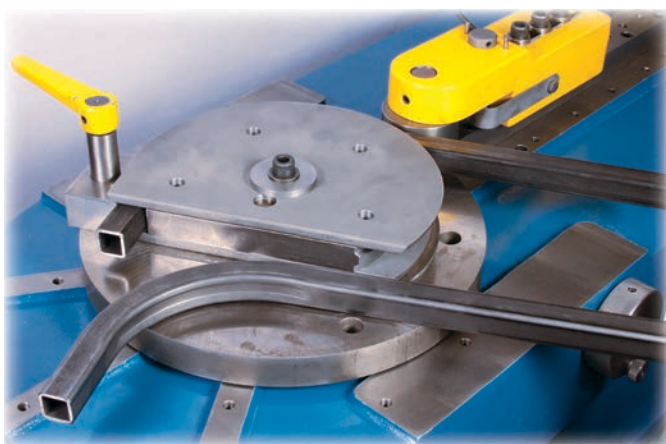
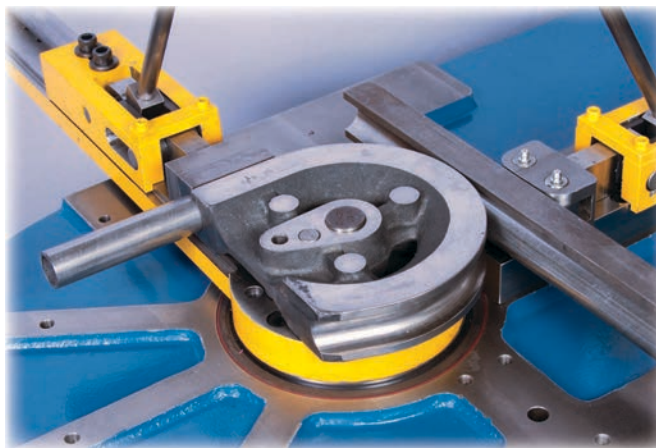
Model 6 Setup - For bending **TUBING, ANGLE AND CHANNEL**. Includes clamps and pressure roller assembly as basic tooling for tube bending.



No. 6 Bender Tooling

Standard A-Style Grooved Radius Collar - for bending round tubing. Used with Clamp Block and Follow Block.

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 the forming operation. This is also true of the Clamp Block and Pressure Tool as only by completely confining the material can a good bend be obtained.



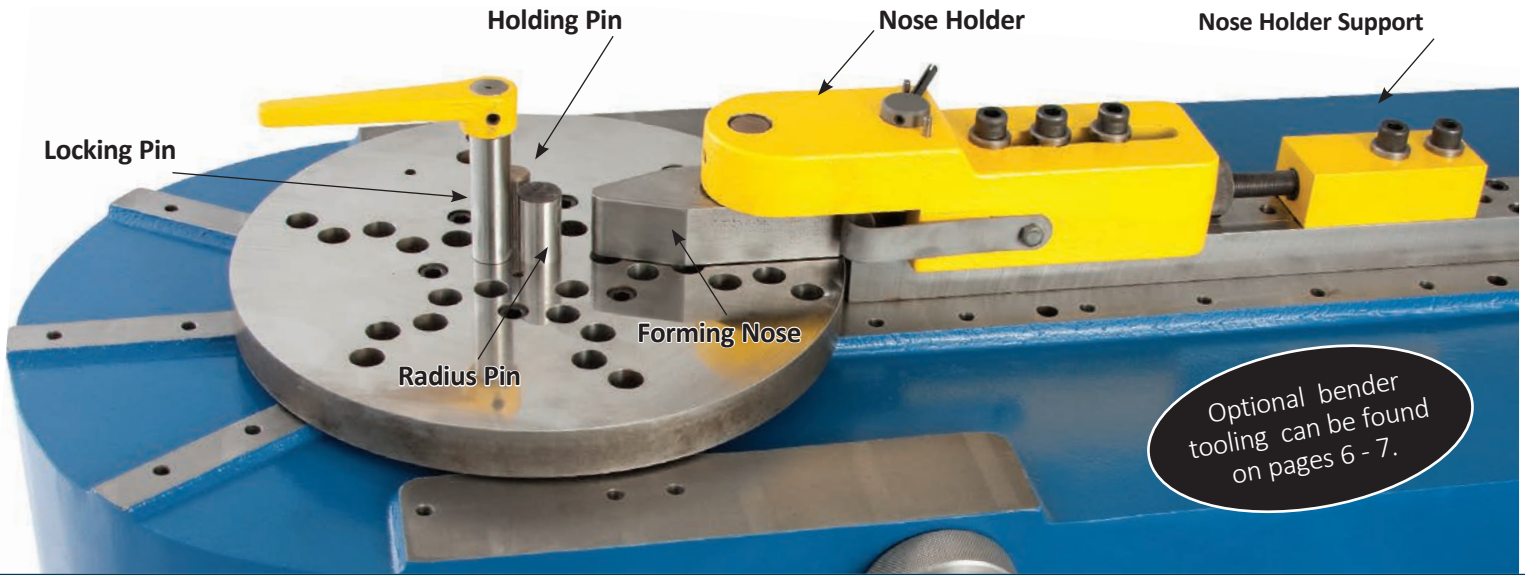
Square Crush Bending Tooling

Special Crush Bend Tooling Packages for Round and Square Tubing - can be designed for use with either 6 or 8 Tooling Head Assemblies.

Crush bend tooling is used primarily for bending thin wall tubing to a tight radius. If it is not necessary for the formed section to retain its original shape, such as in structural components, the tubing can be purposely distorted with this tooling. The "crush" on the inside radius adds more strength to the bend, as well as allowing a tight radius with controlled distortion in the bend area.

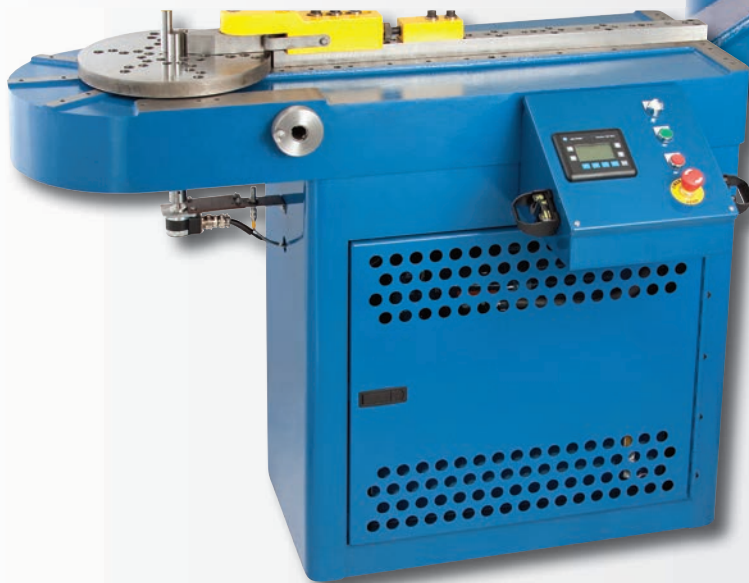
NO. 8 BENDER SETUP

Model 8 Setup - For bending **SOLID STOCK**. Especially suitable for bending eyebolts with centered or off-centered eye bends in one operation.



NO. 8 STANDARD EQUIPMENT

- > Standard Forming Nose
- > Nose Holder
- > Support & Slide
- > Three Locking Pins (sm, med, lrg)
- > Holding Pin
- > Center Radius Pin
- > Mounting Plate
- > Material Length Gauge (not shown)



Space requirements:

W" x D" x H"

Model 6 & 8: 54.5" x 21.75" x 40"
(1384mm x 552mm x 1016mm)

HAND BENDERS

Hand Operated Benders • Models 1 - 1A - 2 - 3 - 4

The Di-Acro Bender is a multi-purpose machine that quickly adapts to a variety of bending operations, whether prototype, production or for duplicating parts with simple, compound or reverse bends in many materials — angle, channel, tubing, rod wire, strip stock, ect. They are “die substitutes” that also produce work not obtainable with dies. The Hand Bender is available in five models with capabilities of bending up to 1" round mild steel bar with a radius of 0 - 12". The Model 4 Bender features a selectable ratchet drive mechanism for increased power when working with heavier materials.

STANDARD EQUIPMENT

Each Di-Acro Hand Bender includes:

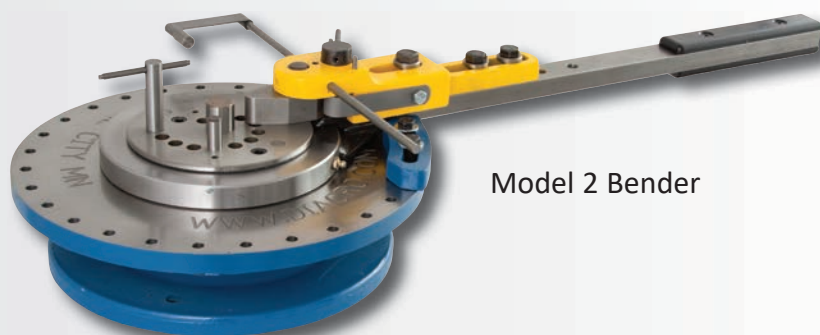
- > **Bend Locating Gauge** - allows any number of parts to be identically duplicated.
- > **Angle Stop** - precisely determines degree to bend.
- > **Locking Pin** - securely clamps material to ensure safety and accuracy.
- > **Center Pin** - cam action provides one radius setup plus mount for additional tooling.
- > **Holding Pin** - holds material in place to provide accurate bends.

OPTIONAL EQUIPMENT

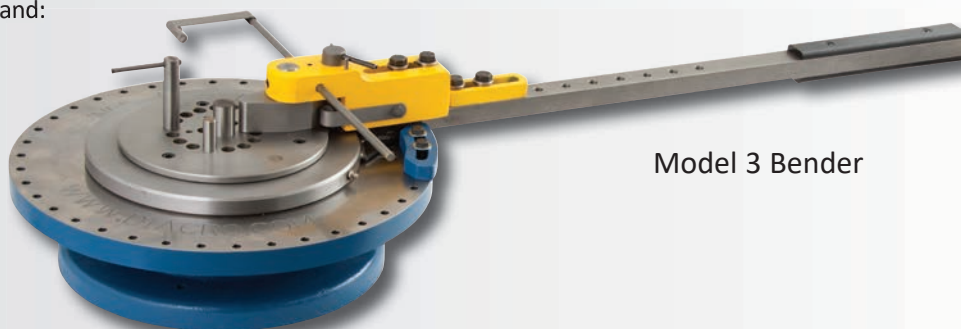
- > Extension Handles - (Models 2 & 3 only).
- > Quik-Lok Clamp - invaluable for production; quickly locks material securely in place and instantly releases for removal.
- > Stand - heavy duty with work shelf.
- > Bend-R-Pak - an assortment of commonly used tools; specially selected for each model of Di-Acro Bender.

Model 1 Bender
(not shown)

Model 1A Bender



Model 2 Bender



Model 3 Bender



Model 4 Bender

Space requirements including optional floor stand:

	W" x H"
Model 1&1A:	32" x 43.25" (813mm x 1098mm)
Model 2:	56" x 42.25" (1422mm x 1073mm)
Model 3:	82" x 42.25" (2083mm x 1073mm)
Model 4:	78" x 42.25" (1781mm x 1073mm)

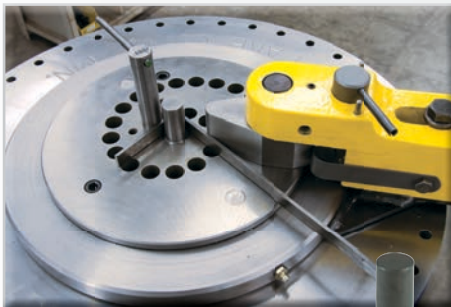
SPECIFICATIONS

Model	1	1A	2	3	4
Maximum radius capacity w/o Quik-Lok	2" (50.8mm)	6" (152.4mm)	9" (228.6mm)	12" (304.8mm)	12" (304.8mm)
Maximum radius capacity with Quik-Lok	2" (50.8mm)	6" (152.4mm)	7" (178mm)	9" (227mm)	9" (227mm)
Height of std. forming nose	.50" (12.7mm)	.75" (19.1mm)	1" (25.4)	1.5" (38.1)	1.5" (38.1)
Center pin hole diameter	.375" (9.525mm)	.5" (12.7)	1" (25.4)	1" (25.4)	1" (25.4)
Operating leverage	8" (203.2mm)	16" (406.4mm)	29" (736.6)	40" (1016)	40" (1016)

MATERIAL CAPACITIES

Model	1	1A	2	3	4
Round mild steel bar	.1875" (4.7625mm)	.3125" (7.9mm)	.5" (12.7mm)	.625" (15.9mm)	1" (25.4mm)
Square mild steel bar	.125" (3.175mm)	.25" (6.4mm)	.375" (9.5mm)	.5" (12.7mm)	.75" (19.1mm)
Steel tubing – 16 ga.	.3125" (7.9375mm)	.5" (12.7mm)	.75" (19.1mm)	1" (25.4mm)	1.25" (31.8mm)
Standard iron pipe	–	–	.3 IPS (9.5mm)	.5 IPS (12.7mm)	1 IPS (25.4mm)
Flat steel bar easy way	.125 x .75 (3.17x19.05)	.1875x1 (4.8x25.4)	.25x1.5 (6.4x38.1)	.25x2 (6.4x50.8)	.375x4 (9.5x101.6)
Flat steel bar hard way	.0625x.50 (1.5875x12.7)	.125x.50 (3.2x12.7)	.125x.75 (3.2x19.1)	.125x1 (3.2x25.4)	.25x1 (6.4x25.4)
Machine shipping weight	22 lbs (10 kg)	60 lbs (27 kg)	90 lbs (41 kg)	220 lbs (27 kg)	270 lbs (27 kg)
Stand shipping weight	–	75 lbs (34 kg)	75 lbs (34 kg)	75 lbs (34 kg)	75 lbs (34 kg)

OPTIONAL BENDER TOOLING



Quill Radius Pin

Used with standard Locking Pin; for forming lighter material to a tight radius.

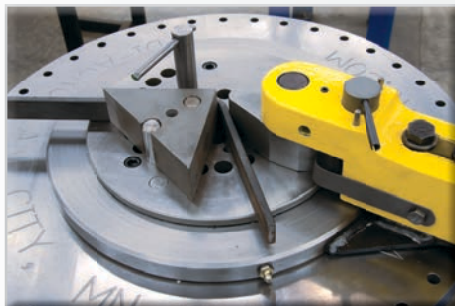
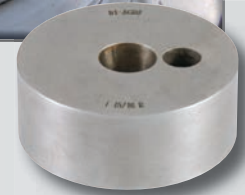


Shoulder Radius Pin

Used with standard Locking Pin; for forming solid material to a larger radius.



Radius Collar - Style B
Used with standard Locking Pin; for forming solid material.



Radius Block

Used with standard Locking Pin and additional Holding Pin; for forming solid material to a tight radius.



Built Up Forming Nose

Used to increase the width range of Di-Acro Benders. Must be used with a taller radius pin or stacked radius collars.



TYPICAL BENDS

- **CENTER / OFFCENTER EYE BENDING**
- **CIRCLE BENDING**
- **EDGEWISE BENDING**

ACCESSORIES & TOOLING



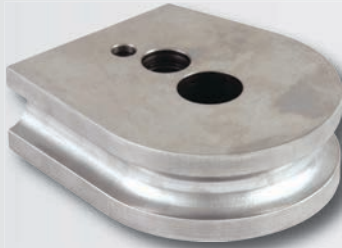
Shorten set-up time and increase clamping pressure with our Quik-Lok Clamp. This accessory is available for all manual Benders, and is an essential component when bending tubing, angle, channel and extrusions as it locks the material securely. It can be instantly released for removal of the formed part.

This clamping device is easily adjusted to form various radius sizes, up to a 9" centerline radius on the Model 4 Bender.

All Type "A" Radius Collars, for tube bending, have been designed for use with the Quik-Lok Clamps.

Grooved Radius Collar Style A

Used with Quik-Lok Clamp, Clamp Block and Follow Block, or can be used with the Grooved Forming Roller for tube bending.



Clamp Block

Used with Quik-Lok Clamp for tube bending.



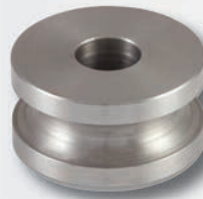
Follow Block

Used with Grooved Radius Collar for tube bending.



Standard Forming Roller

Replaces Forming Nose to eliminate part marking or back up for Follow Block to reduce drag.



Grooved Forming Roller

Used with Quik-Lok Clamp for forming larger radius in tubular stock. (For radius of 5 times material O.D. or larger)



APPLICATION INFORMATION

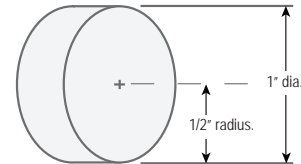
HELPFUL TIP

Typical bending capacity for all Di-Acro benders
(based on 16 ga. mild steel).

- **SOLID BAR**– Smallest radius is equal to the diameter of the bar.
- **TUBING**– Smallest centerline radius is equal to 2-1/2 times the tube diameter.

DIAMETER vs. RADIUS – Radius equals 1/2 of the Diameter

Note: Order by RADIUS SIZE and BENDER MODEL NUMBER.



BEND-R-PAK TOOLING ASSORTMENT

ADD-ON
ITEM

Bend-R-Pak for No. 1	Bend-R-Pak for No. 1A	Bend-R-Pak for No. 2
.1875" radius pin .5" radius collar Zero radius block .5" square block Grooved radius collar–style B (.375" OD tubing to a 1" radius) Clevis clamp .375" OD tubing Follow block for .375" OD tubing–6" length Forming roller Scroll collar	.1875" radius pin .5" radius pin 1" radius collar Zero radius block .625" radius pin Grooved radius collar–style B (.5" OD tubing to a 1.25" radius) Clevis clamp for .5" OD tubing Follow block for .5" OD tubing–6" length Forming roller Scroll collar	.1875" radius pin 1" radius collar 1.75" radius collar Zero radius block .6875" radius pin Grooved radius collar (for .75" OD tubing to a 2" radius) Clevis clamp for .75" OD tubing Follow block for .75" OD tubing–9" length Forming roller Scroll collar with scroll pin
Bend-R-Pak for No. 3	Bend-R-Pak for No. 4	<p>The assorted tooling in our Bend-R-Paks are great for schools and maintenance departments.</p>
.1875" radius pin 1.5" radius collar 2.75" radius collar Zero radius block .625" radius pin Grooved radius collar (for .75" OD tubing to a 2" radius) Clevis clamp for .75" OD tubing Follow block for .75" OD tubing– 9" length Forming roller Scroll collar with scroll pin	.1875" radius pin .625" radius pin 2.75" radius collar Zero radius block Grooved radius collar (for .75" OD tubing to a 2" radius) Clevis clamp for .75" OD tubing Follow block for .75" OD tubing– 9" length Forming roller	

ROD PARTER WITH EJECTOMATIC GAUGE

The Di-Acro Rod Parter is a rugged precision machine designed for accurately cutting or "parting-off" rods and bars virtually burr free, without distorting their roundness or crushing the material. The "parting-off" operation is a combination shearing-breaking action.

The cutting principle employed in this precision machine provides the highest possible production rate for "parting-off" rods and bars. Making it an extremely valuable companion machine to the Di-Acro Benders.

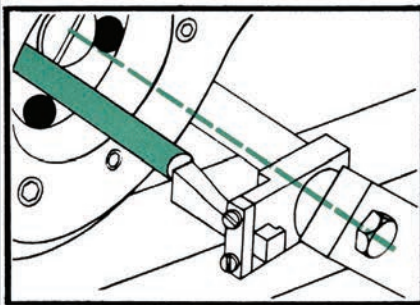
Di-Acro®

**GREAT
COMPANION
for all
DI-ACRO BENDERS**



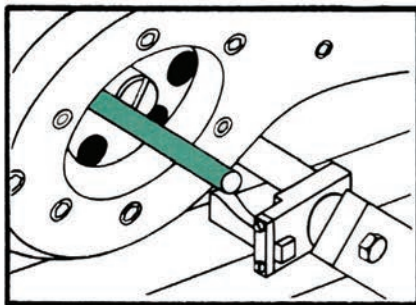
EJECTOMATIC GAUGE

The Ejectomatic Gauge is supplied as standard equipment with all Di-Acro Rod Parters. Production output of the Di-Acro Rod Parter is greatly increased by the use of this gauge as it allows the three separate operations of gauging, parting and ejecting to be automatically obtained in a single working cycle. The gauge is especially valuable when cutting lengths under 6".



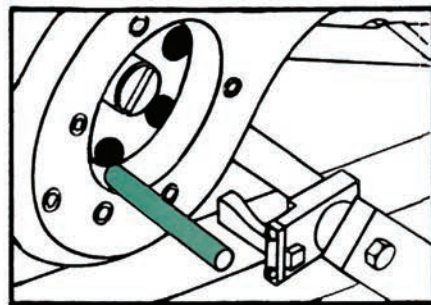
1. POSITIVE GAUGE STOP

Set Gauge Arm so the bolt lines up with the Pivot Bolt of the Rod Parter, then adjust Gauge for desired hole and length of piece. Only a portion of the rod should contact the gauge.



2. PRECISION PARTING

Advance material until stopped by Gauge. Note how the rod slips off the end of the Gauge when the Handle is pulled down and the rod is parted.



3. AUTOMATIC EJECTION

As the handle is returned and the material is advanced, the cut piece is automatically ejected and the next piece is gauged.

Di-Acro Terms, Conditions & Ordering Information

To Order

Indicate the machine model number and quantity. For machine owners with no manuals, please call us. We'll be happy to supply one free-of-charge so that you may identify any parts or tooling required.

Terms

Net due 30 days with approved credit, C.O.D., Visa, Master Card, Discover or American Express.

Prices

Call for current machine pricing.
All prices are subject to change without notice.

Return Policy

Machines and tooling are subject to a 20% restock charge. Custom made machines or tooling are non-returnable. To return, Di-Acro must be notified without 30 days of receipt of machine or tooling. All requests must be confirmed with Di-Acro® before returning. Di-Acro's liability is limited to the purchase price of the goods.

**For additional information visit:
www.diacro.com**

Di-Acro Warranty

Defective parts of a product manufactured by DI-ACRO will be replaced or repaired at no charge for twelve (12) months following delivery to the original purchaser. Labor is included for the first 90 days. This warranty becomes void when products have not been used according to instructions furnished by DI-ACRO, nor does it cover any altered parts or unauthorized repairs. We cannot be responsible for the cost of repairs made or attempted outside of our factory. All warranty claims are made FOB our plant, providing such items(s) is returned freight prepaid to our plant for examination.

This warranty does not apply to parts, components, or systems not manufactured by DI-ACRO. These products are covered instead by the existing warranties, if any, of their manufacturers. Normal service items with a reasonable life expectancy of less than one year are warranted only to the extent of the reasonable life under normal use and service.

Authorization must be obtained from DI-ACRO before returning parts or equipment to the factory. DI-ACRO will satisfy this warranty by replacing the product or refunding the purchase price upon receipt and inspection of the product.

DI-ACRO's liability under this warranty shall not exceed the amount paid for the product.

THIS IS DI-ACRO'S SOLE WARRANTY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHICH ARE HEREBY EXCLUDED, INCLUDING IN PARTICULAR ALL WARRANTIES OF MERCHANTABILITY, FITNESS OR ANY LOSS, DAMAGE OR EXPENSES DIRECTLY OR INDIRECTLY RELATED TO THE USE OF ITS PRODUCTS OR FROM ANY OTHER CAUSE OR FOR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, LOSS OF TIME AND LOSS OF PRODUCTION.

IT IS EXPRESSLY UNDERSTOOD THAT DI-ACRO IS NOT RESPONSIBLE FOR DAMAGE OR INJURY CAUSED TO OTHER PRODUCTS, MACHINERY, PROPERTY OR PERSONS BY REASON OF THE USE OF ITS PRODUCTS.

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