

INSTALLATION & OPERATION MANUAL

FlexArm Assembler

**Models: S36 & M60
Arm Only with V-Block**

Distributed by Ergonomic Partners

Sales@ErgonomicPartners.com

www.ErgonomicPartners.com

Tel: (314) 884-8884

TORQUE AND WEIGHT LIMITATIONS

Model Number	Max Motor Torque		Working Range		Max Tool Weight	
	Ft Lbs	Nm	Inches	Cm	Lbs	Kg
OCVA-24	7	9.5	13-36	33-91	7	3.2
CVA-10	10	13.6	8-28	20-71	10	4.5
FAV-14	10	13.6	19-37	48-94	10	4.5
FAV-18	10	13.6	21-46	53-117	10	4.5
FAV-24	10	13.6	30-57	76-145	10	4.5
CVA-20	20	27.1	8-28	20-71	12	5.4
FAV-14-20	20	27.1	19-37	48-94	15	6.8
CVA-30	30	40.7	8-28	20-71	12	5.4
FAV-14-30	30	40.7	19-37	48-94	15	6.8
A-32	50	68	11-34	28-86	12	5.4
OCVA-M-60	50	68	19-43	48-109	12	5.4
S-36	80	109	14-51	36-130	25	11.3
B-19	100	137	1-42	3-107	35	15.9
M-60	80	109	22-76	56-193	14	6.4
RNR-20	120	163	15-72	38-183	50	22.7
G-30	150	204	20-76	51-193	50	22.7
G-36	400	542	20-78	51-198	50	22.7
G-60	800	1085	20-84	51-213	60	27.2

Exceeding the weight and Torque Limitations will void the factory warranty



WARNINGS & CAUTIONS FOR SAFE OPERATION

- READ THE MOTOR MANUAL AND UNIT MANUAL BEFORE OPERATING
- WEAR EYE PROTECTION WHEN OPERATING THIS MACHINE
- DO NOT WEAR JEWELRY, LOOSE CLOTHING OR LONG HAIR WHEN OPERATING
- DO NOT WEAR GLOVES WHEN OPERATING THIS MACHINE
- TURN OFF THE AIR SUPPLY BEFORE ADDING OIL TO THE FILTER/LUBRICATOR
- TURN OFF THE AIR SUPPLY BEFORE PERFORMING ANY MAINTENANCE OPERATIONS
- HEARING PROTECTION IS RECOMMENDED
- DO NOT USE DAMAGED, FRAYED OR DETERIORATED AIR HOSES AND FITTINGS
- REMOVING THE TOOL OR WEIGHT FROM THE ARM WILL ALLOW THE ARMS TO EXTEND RAPIDLY POSSIBLY CAUSING DAMAGE OR INJURY
- KEEP HANDS CLEAR OF THE MOTOR CHUCK AND TAP WHEN ACTUATING THE MOTOR
- KEEP HANDS CLEAR OF PINCH POINTS ON THE UNIT WHEN OPERATING
- PERFORM REGULAR MAINTENANCE ACCORDING TO THE MANUALS - INCLUDING FILLING THE MOTOR LUBRICATOR WITH THE CORRECT OIL AND GREASING THE MOTOR GEARS
- DO NOT ALTER OR MODIFY THE MOTOR OR UNIT
- PERIODICALLY INSPECT FOR DAMAGE, LOOSE HARDWARE OR ANYTHING IRREGULAR
- READ THE FLEXARM WARRANTY PAGE BEFORE PERFORMING ANY MAINTENANCE OR REPAIRS

FLEXARM

Limited Warranty

A **new** FlexArm has a 3 year limited warranty on parts and labor. This warranty does not apply to a FlexArm determined to have been misused or abused, improperly maintained, or having defects attributed to the use of non-genuine repair parts.

Original pressure cylinders have a 3 year limited warranty from the date of purchase. When replacing one of the pressure cylinders, make sure not to scratch, mar, or nick the shaft or tube on either the old cylinder being replaced or the new cylinder being installed. All warranty cylinders must be returned to Midwest Specialties for evaluation. The warranty is void if the cylinder to be evaluated shows signs of scratches or nicks on the cylinder shaft or tube. Damaged cylinders cannot be returned to the manufacturer for warranty claims. **Replacement cylinders carry a limited 1 year warranty from the date of purchase.**

Pneumatic motors have a 3 year limited warranty (warranted to be free of defects in material and workmanship from the date of purchase). This warranty does not apply to the following (perishable) components:

- filters - springs
- blades/vanes - O-rings

This warranty is void if it has been determined that the motor was misused, abused or improperly maintained.

Midwest Specialties is not responsible for a customer's air quality. We supply the basic tools and offer a coalescent filter option for those who have experienced excessive moisture and water. The responsibility for clean, dry air falls upon the individual shop. Any pneumatic motor coming in for evaluation or repair with rusted components will not get warranty coverage because this is considered improper maintenance.

Once the original warranty expires, repaired Motors and Arms carry a limited 60 day warranty from the date of the repair.

Tap Holders and Helicoil components are considered perishable tooling and therefore do not carry a warranty. However, Size 2 through Size 4 Tap Holders may be reworked depending of the severity of the damage or wear. Please contact Midwest Specialties for a return authorization and the holders can be evaluated.

The warranty is void if changes to the FlexArm or motor, or attempts to repair it or its components are made without the expressed authorization of Midwest Specialties Inc.

The warranty is based on normal usage which would be the equivalent of a 40hr work week.

For technical assistance or questions concerning the proper care and maintenance of the FlexArm unit or the pneumatic/hydraulic motors, please contact **Midwest Specialties, Inc. at 800-837-2503.**

Installation Instructions for Angle Mount

- 1) Drill four bolt holes on a flat, smooth table or work bench as indicated in Figure 1.

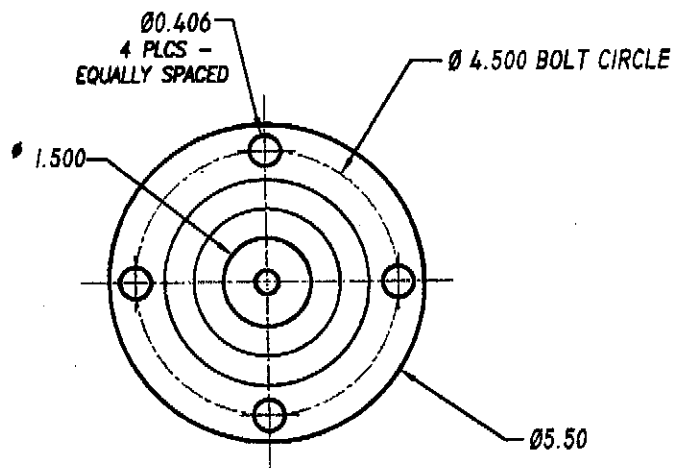


FIGURE 1
Bolt Circle Pattern

- 2) Fasten the *FlexArm* base mount to the table and secure it with 3/8" bolts (see Figure 2).

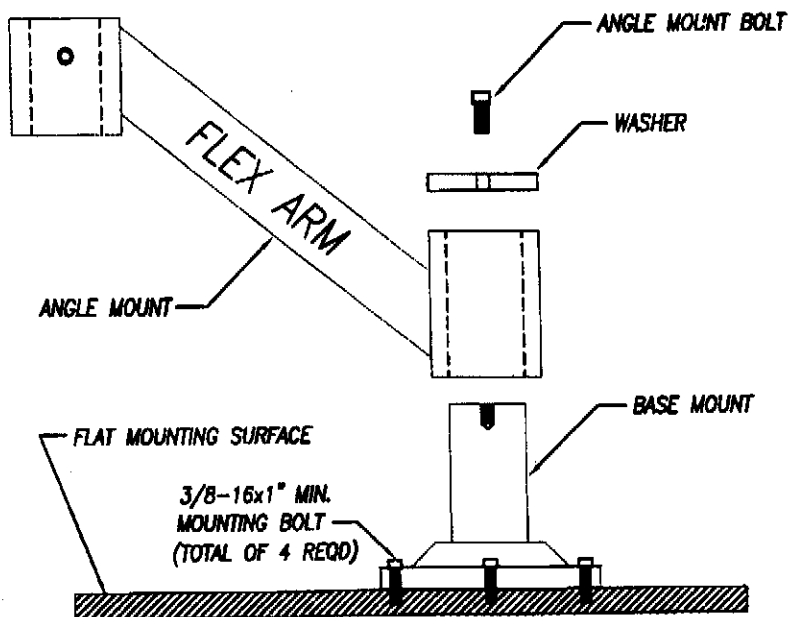


FIGURE 2
Angle Mount Assembly

- 3) Slide the angle mount over the shaft of the base mount (see Figure 2).
- 4) Secure the angle mount by placing the washer on top of the lower bore and tighten the angle mount bolt securely into the base mount. *If this bolt is not properly tightened and the angle mount is not secure, the machine will not maintain perpendicularity. The angle mount bolt must always be tight before operating.*
- 5) Slide the rear pin into the upper bore of the angle mount (see Figure 3). Note: The rear pin is specifically honed to fit the angle mount sent with the unit (use care when inserting the unit). The FlexArm angle mounts should not be interchanged.

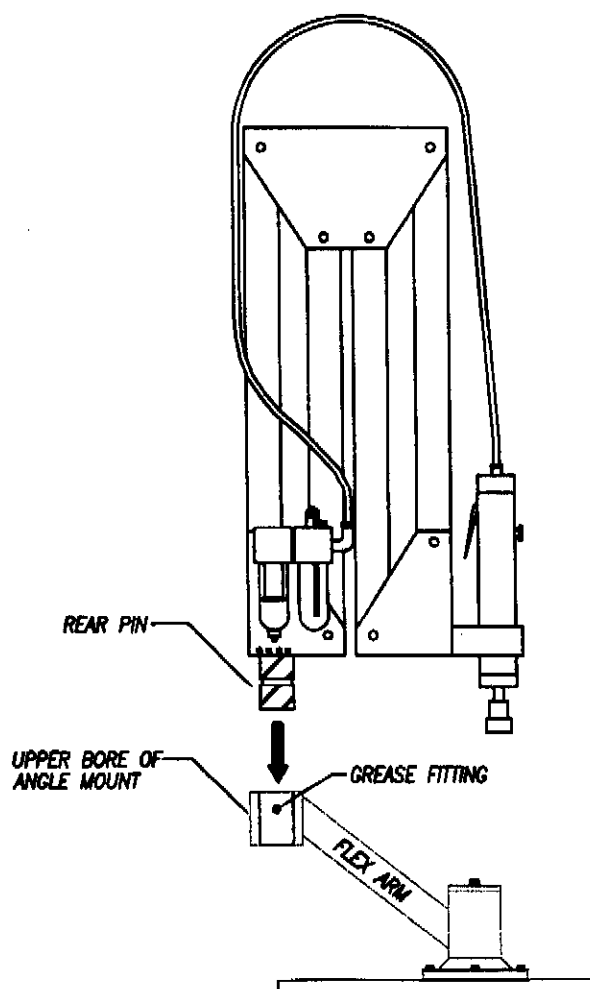


FIGURE 3
Inserting the FlexArm Tapping Machine into the Angle Mount Assembly

- 6) Lubricate the rear pin through the grease fitting located on the angle mount's upper bore .
Use clean, gear grease only.
- 7) Install a 1/4 NPT fitting to the left port of the filter/lubricator assembly and attach a 1/2" ID, incoming airline to the fitting (see Figure 4). Do not use any quick disconnect fittings on the incoming airline. The unit must have the proper air supply (90-120 psi and 27-28 cfm) AT **THE MOTOR** to generate the required torque to drive the tap.

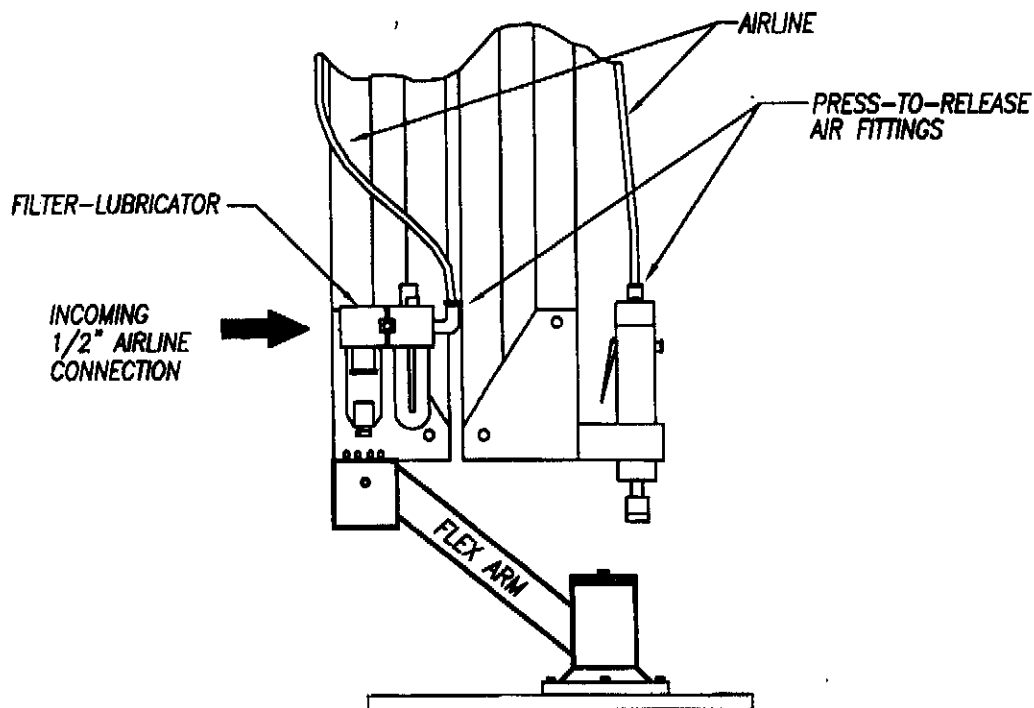


FIGURE 4
Airline Connections

- 8) Check the airline connections to make sure the hose has not come loose from the press-to-release fittings during shipping; the hose must be completely pushed into the fittings to lock in under air pressure (see Figure 4).

SEE FILTER/LUBRICATOR DIAGRAM IN THE PARTS SECTION OF THE MANUAL

- 9) Fill the lubricator bowl approximately 3/4 full by removing the black fill plug on top of the lubricator and pouring the oil into the fill port. *Use only a quality ISO Grade 32 hydraulic or spindle oil. Never use Marvel Mystery Oil, synthetic air tool oil, or similar products! Do not permit the oil level to go below the bottom end of the siphon tube in the lubricator bowl.*
- 10) With the air motor running, slowly adjust the lubricator so 1-3 drops of oil are dispensed per minute through the tube on top of the lubricator dome sight. Clockwise decreases the flow and counter clockwise increases the flow. **SMC** brand filter/lubricators use the dome sight as the flow adjuster and **Janatics** brand filter/lubricators use a separate flow valve located behind the fill plug and dome sight. NOTE: It may be necessary to open the flow valve considerably before the oil starts to drip. Then slowly close the valve until the drip rate of 1-3 drops per minute is achieved.
- 11) **SMC** filters are equipped with an auto drain and will automatically remove water from the filter bowl. **Janatics** brand filters use a manual push button drain and **MUST** be periodically checked. Remove any water from the filter bowl by pressing the drain button located at the bottom of the filter assembly.
- 12) Check the counterbalance of the cylinders (refer to the Counterbalance Adjustments sheet in this manual for detailed instructions).

Counterbalance Adjustments

Both rear and front arms adjust to meet the operator's preference:

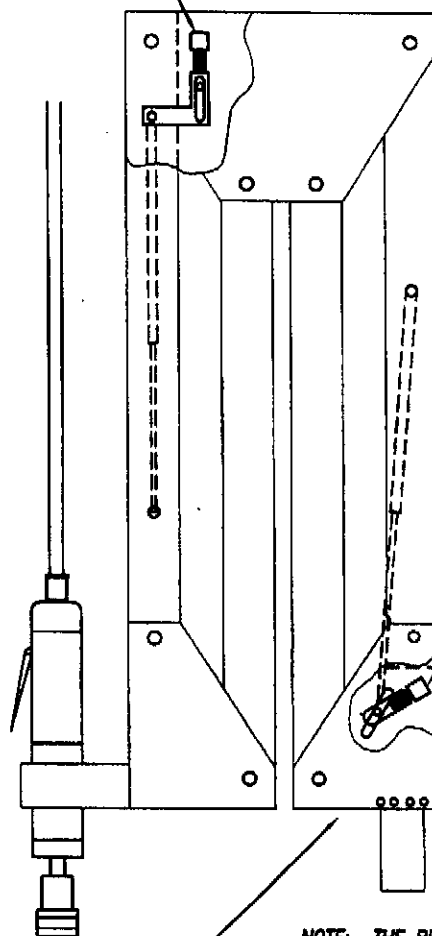
- a) retract completely to vertical (closed) position; or
- b) maintain angular (open) position.

To adjust the counterbalance, turn the adjuster screw located between the top plates and rear plates. This will move the dowel pin up or down in the plate slot.

- 1) For light weight tools and accessories, **decrease** cylinder pressure by turning the socket head screw **clockwise** with a 3/16 allen wrench. This will move the dowel pin towards the top of the slot. (helping to maintain angular (open) position).
- 2) For heavy tools and accessories, **increase** cylinder pressure by turning the socket head screw **counter-clockwise** with a 3/16 allen wrench. This will move the dowel pin towards the bottom of the slot. (helping to maintain the closed (vertical) position).

NOTE: The ideal counterbalance will hold the tool just above the work piece when not being used. Once the operator releases the tool, the arm should lift up slightly and remain in place for the next operation.

FRONT CYLINDER ADJUSTER
FOR TAPPING UNIT AND ASSEMBLER



REAR CYLINDER
ADJUSTER FOR TAPPING UNIT

NOTE: THE REAR CYLINDER ADJUSTER
FOR THE FLEXARM ASSEMBLER
UNIT IS LOCATED AT THE BOTTOM
OF THE UNIT. IT OPERATES AS
INDICATED ABOVE.

FlexArm Maintenance :

- ***Oiling the Motor:***

If the FlexArm has been sitting a while between jobs it may be necessary to add 4-5 drips of oil directly into the motor inlet to place oil on the vanes before running. It will take the lubricator a short time to actually get the oil to the motor when first running the unit. The lubricator must be checked periodically to ensure that the flow rate of 1-2 drops per minute is maintained.

- ***Cleaning the FlexArm:***

The FlexArm should be periodically cleaned and free of dirt, debris, grinding dust, etc.,. An air line can be used to blow the dust and chips away from the arms, arm joints, motor, chuck, etc.,. ***Never*** use oil or W.D.40 or any other lubricant to lubricate the arm joints (arm joints are constructed with self lubricating bushings and require no maintenance). Never use harsh cleaners or solvents. Never allow any cleaning agent to reach the arm joints.

- ***Lubricate the base mount: (Models S36, M60, RNR-20 Only)***

The base mount of the FlexArm requires periodic care and maintenance. Monthly lubrication or bimonthly lubrication is adequate. If it is necessary to remove the unit and angle mount from the base mount, do not allow the base mount shaft to be contaminated by dirt or foreign materials. If the base mount becomes contaminated, clean the shaft of the base mount thoroughly prior to re-assembly. Lubricate the base mount by applying a slight amount of grease to the shaft to prevent premature wear.

- ***Lubricate the Base Mount: (Model A32 Only)***

The base mount of the A32 requires very little maintenance. If it is necessary to remove the unit from the base, do not allow the shaft or needle bearings to be contaminated by dirt or foreign materials. Always clean the base mount and shaft prior to re-assembly. Lubricate the needle bearings only by removing the two flat washers on both sides of the needle bearing and applying a slight amount of grease.

- ***Periodically check the bolts throughout the unit for tightness :***

If the bolts have loosened up, use loctite 242 (blue) on the threads and reassemble. This should prevent any further problems.

- ***Rear Pin and Angle Mount Lubrication:***

If it becomes necessary to remove the unit from the angle mount, make sure to cover the angle mount bore to prevent and foreign materials from entering. If the angle mount becomes contaminated, clean prior the re-assembly. Always make sure the rear pin is clean and has a slight amount of grease before re-assembly. ***If using an angle mount with roller bearings, the entire angle will have to be cleaned in a parts cleaner or cleaning tank to remove the dirt and dust. You should submerge the angle and use a brush to remove both the grease and any contaminants. Then re-grease the roller bearings before re-assembly.***

FlexArm Maintenance :

- **Filter / Lubricator :**

Check that the filter/lubricator is set for approximately one drop per minute as indicated in the FlexArm manual. Always use a 10 wt. hydraulic oil or light spindle oil (EP-32 hydraulic oil is recommended). Never use Marvel Mystery Oil or synthetic products. Make sure to clean the filter and drain excess water from the filter bowl on a regular basis. See the FlexArm manual for detailed instructions.

- ***If utilizing a motor with a quick change chuck:***

Keep both the motor and the chuck free from contamination by cleaning regularly: An air line can be used to blow dust, dirt, and debris off of the motor and chuck collar. Make sure to clean inner surface of the chuck as well. If contaminants build up too excessively, it may become necessary to soak the entire chuck into a cleaning solvent or WD-40 type penetrating oil before using the air line. Doing this regularly will considerably reduce, and may even eliminate, the need to disassemble the quick change chuck to clean it. If, however, the chuck has accumulated so much dirt and grime that disassembly is necessary, follow the procedures given below:

Quick Change Chuck with Knurled Collar:

Lift the snap ring out of the groove and slide it towards the motor, resting on the chuck body. The collar can then slide along the chuck body, exposing the compression spring and the two ball bearings. (CAUTION: The ball bearings are held in place only by the collar; be careful not to lose these ball bearings!) Clean the exposed area of the chuck body, the spring, and the two ball bearings and reassemble the chuck. Use the spring to hold one of the ball bearings in place, position the other ball bearing, and slide the collar back into position (it may be necessary to depress the ejector in the center of the chuck body to completely slide the collar back into place). Replace the snap ring in the groove on the chuck body.

Quick Change Collar with Smooth Collar:

Slide the collar upward until it locks into the upper most position. The snap ring is located between the chuck body and the collar (on the open end where the tap holders insert). Use an awl or small slotted screwdriver to locate one of the snap ring ends. Rotate the snap ring end until it is positioned in one of the two chuck slots. It can now be carefully lifted upward and by using a circular motion, the ring can be completely removed. The collar can now be removed by depressing the ejector in the center of the chuck body (CAUTION: The collar may eject rapidly. Be careful not to damage the collar or lose the ball bearings, spring, or snap ring). Clean the exposed area of the chuck and reassemble (It may be necessary to depress the ejector in the center of the chuck body to completely slide the collar back into place). Replace the snap ring in the groove on the chuck body.

FlexArm Maintenance :

- **Magnet and Flange Mount Maintenance: (Models S36, M60 and RNR Only)**

Using a FlexArm with a magnetic base requires additional periodic care and maintenance. When the magnetic base mount is used to support the FlexArm, a degree of residual magnetism is transferred to the flange mount on the magnet and to the rear pin of the FlexArm. This residual magnetism tends to attract metallic particles. If the FlexArm is used with a die grinder, the creation of minute, metallic, dust particles becomes a major concern. When the grinding dust mixes with the lubricating grease, an abrasive compound is created that quickly wears away the exterior surface of the rear pin and interior surface of the flange Mount. When removing the FlexArm from the magnet flange, always cover the exposed bore to prevent any contamination. The magnet itself should be cleaned regularly with an air line to remove dirt and dust. If the surfaces of the bore and the shaft are not cleaned and re-greased prior to assembly, these surfaces experience premature wear that effects both product life and overall perpendicularity. If the FlexArm is not going to be immediately repositioned in the magnet flange mount, wrap the rear pin with a clean, dry cloth, paper-towel, plastic sheet or plastic bag. Lubricate the rear pin through the grease fitting located on the side of the flange mount. ***If using a flange mount with roller bearings, the entire flange will have to be cleaned in a parts cleaner or cleaning tank to remove the dirt and dust. You should submerge the flange and use a brush to remove both the grease and any contaminants. Then re-grease the roller bearings before re-assembly.***

Prevention will insure a long-wearing bearing surface that retains its perpendicularity. Monthly maintenance should be performed and recorded.

CYLINDER REPLACEMENT INSTRUCTIONS

(Refer to the Cylinder Replacement Diagram)

Replacement cylinders installed by the customer carry a 30 day limited warranty from the date of purchase. When replacing one of the pressure cylinders, make sure not to scratch, mar, or nick the shaft on either the old cylinder being replaced or the new cylinder being installed. All warranty cylinders must be returned to Midwest Specialties for evaluation.

NOTE: The warranty is void if the cylinder to be evaluated shows signs of scratches or nicks on the cylinder shaft or body.

REAR CYLINDER REPLACEMENT

- R1. Turn the socket head cap screw on the bottom adjuster until the dowel pin reaches the bottom of the slot on the rear plate (counter clockwise direction).
- R2. Raise the two front arms to the fully extended position.
- R3. While supporting the front arms, remove the rear arm screws on the top plates, as indicated in the diagram, so that the rear arm is free and access to the rear cylinder can be made.
CAUTION: *Carefully lower and place the front portion of the FlexArm on the work surface after the rear arm screws have been removed. Care must be exercised when taking the arm apart!*
- R4. Remove the shoulder bolt attaching the cylinder to the arm. Note that there is a spacer on either side of the cylinder tube "end fitting" to center the cylinder in the arm slot. **Do not lose these spacers!**
- R5. Unscrew the old cylinder from the "end fitting" attached to the rod end of the cylinder. Leave the old cylinder "end fitting" and adjuster in between the plates, you will reuse them. **CAUTION: You will have to wrap a towel or rubber matting around the cylinder rod to remove it and also to tighten the new cylinder. Dents or scratches on the cylinder rod will cause the nitrogen gas to leak, leading to the need for another cylinder and voiding any warranty.**
- R6. Remove the "end fitting" from the rod end of the new cylinder. Use care not to damage or scratch the cylinder rod.
- R7. Screw the new cylinder into the "end fitting" attached to the bottom adjuster. Replace the shoulder bolt and put one spacer on each side of the "end fitting" on the tube end of the cylinder. **FAILURE TO USE THE SPACERS MAY CAUSE PREMATURE CYLINDER WEAR AND POSSIBLE CYLINDER FAILURE.**
- R8. Reassemble the rear arm and plates with the rear arm screws. **Be certain that all fasteners are secured with loctite 242.**

FRONT CYLINDER REPLACEMENT

- F1. Turn the socket head cap screw on the top adjuster until the dowel pin reaches the lowest point in the slot (counter clockwise direction)
- F2/F3 Hold the front arm securely. Remove the arm screws on the front plates so that the front arm is free and can be slowly extended to access the cylinder. **CAUTION:** Once the screws are removed, the arm will want to kick upward! Guide the arm upward to the full extension and the pressure should be off the cylinder.
- F4. Remove the shoulder bolt attaching the cylinder to the arm. Note that there are two spacers on either side of the cylinder “end fitting” to hold the cylinder in place. Do not lose these spacers!
- F5. Unscrew the old cylinder tube end, *by hand*, from the “end fitting” attached to the cylinder adjuster (see cylinder replacement diagram). Leave the old cylinder “end fitting” and the adjuster between the plates, you will reuse them.
- F6. Remove the “end fitting” from the tube end of the new cylinder. Use care not to damage or scratch the cylinder rod. Dents or scratches on the cylinder rod will cause the nitrogen gas to leak, leading to the need for another cylinder.
- F7. Screw the tube end of the new cylinder, *by hand*, into the “end fitting” attached to the adjuster. It is only necessary to get the cylinder hand tight - do not over tighten.
- F8. Replace the shoulder bolt and put one spacer on each side of the “end fitting” on the rod end of the cylinder. **FAILURE TO USE THE SPACERS MAY CAUSE PREMATURE CYLINDER WEAR AND POSSIBLE CYLINDER FAILURE.**
- F9. Reassemble the front arm and plates with the front arm screws. **Be certain that all fasteners are secured with loctite 242, 243 or 248.**

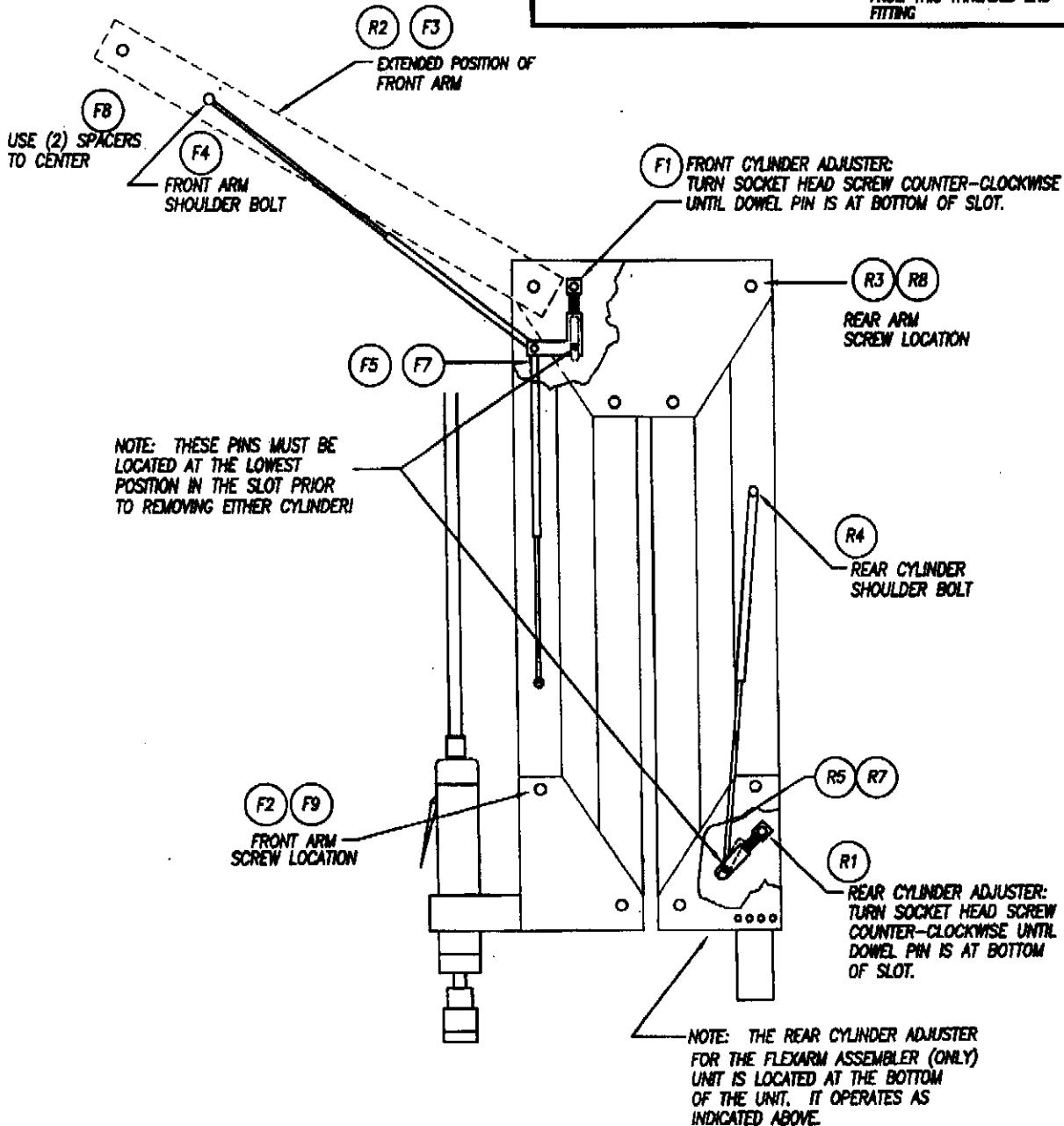
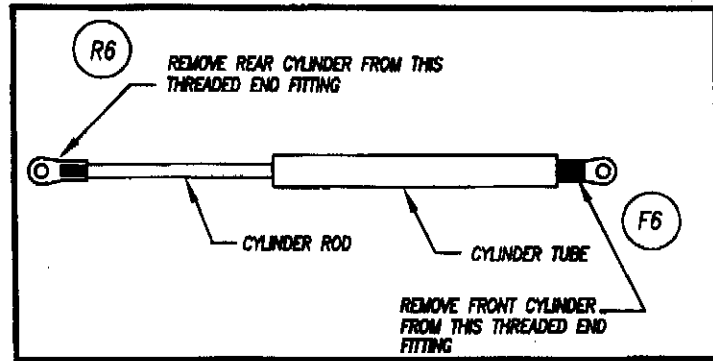
Contact Technical Support at 419-738-8147 for additional information.

MIDWEST SPECIALTIES, INC.

REV.03/31/06

CAUTION!!

EXERCISE EXTREME CARE WHEN FRONT ARM SCREWS ARE REMOVED FROM BOTH FRONT PLATES. TENSION STILL EXISTS EVEN WHEN THE ADJUSTER HAS BEEN TAKEN TO THE LOWEST LEVEL, AND CAN CAUSE THE ARM TO SPRING OUT WITHOUT WARNING!

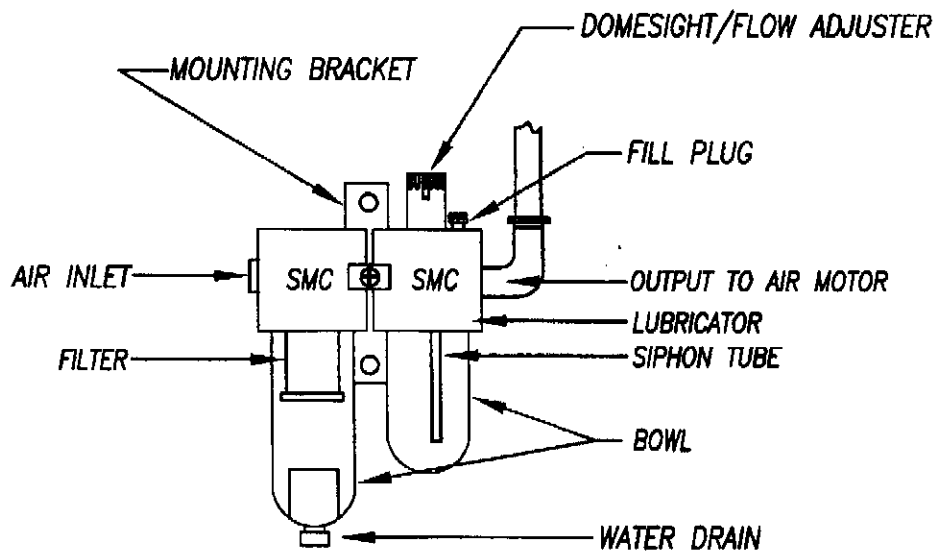


CYLINDER REPLACEMENT PARTS

The cylinder Part Number for your unit is screen-printed in white or is printed on a paper label on the black barrel of the cylinder. The cylinder number is prefixed by "C-16" and is followed by 5 digits. When ordering replacement cylinders, please provide the complete "C-16" number taken from the cylinder on your unit.

Part No:	Description:
420001	FILTER BOWL KIT (INCLUDES POLY BOWL, METAL GUARD, O RING, AND AUTO DRAIN)
420002	FILTER ELEMENT (5 MICRON)
420003	O-RING FOR BOWL (FOR FILTER OR LUBRICATOR SIDE)
420004	MOUNTING BRACKET & FRONT CLAMP (WITH 2 O-RINGS, 2 SCREWS)
420005	O-RING FOR MOUNTING BRACKET (2 REQ.)
420007	LUBRICATOR BOWL KIT (INCLUDES BOWL, GUARD & O-RING)
420008	DOMESIGHT
420009	FILL PLUG
420000	FILTER ASSEMBLY (COMPLETE HALF)
420006	LUBRICATOR ASSEMBLY (COMPLETE HALF)
	MISCELLANEOUS ITEMS
LB-2000	TAP LUBRICANT, 1 GALLON
EP-32	HYDRAULIC OIL, 1 GALLON (AIR MOTOR)
0391	FILTER/LUBRICATOR (COMPLETE ASSEMBLY WITH HOSE FITTING)
0390	FILTER/LUB WITH GAUGE (COMPLETE ASM WITH HOSE FITTING)

SMC FILTER/LUBRICATOR



Midwest Specialties/FlexArm will only warranty Filter/Lubricators that utilize an ISO Viscosity Grade 32 type hydraulic oil, comparable hydraulic, light, non detergent oil or ISO 32 Spindle oil. (EP oils are acceptable as long as they are ISO VG-32). Do not use synthetic oils.

The Filter/Lubricator will perform satisfactorily using compatible misting type, petroleum based oils, with a viscosity range of 100 to 200 SUS at 100 degrees Fahrenheit and a minimum aniline point of 200 degrees Fahrenheit. Do not use oils with adhesives, compounded oils containing solvents, graphite, detergents or anti-wear additives.

Harmful Compressor Oils & Other Materials:

Compressor Oils:

Cellulube No. 150 & 220	Phrano
Haskel No. 568-023	Pydraul AC
Houghton & Co. Oil No. 1120, 1130 & 1055	Sears Regular Motor Oil
Houtosafe 1000	Sinclair Oil "Lily White"
Krano Oil	Skydrol
Keystone Penetrating Oil, No. 2 & 500	Tenneco Anderol No. 495 & 500

Harmful Substances:

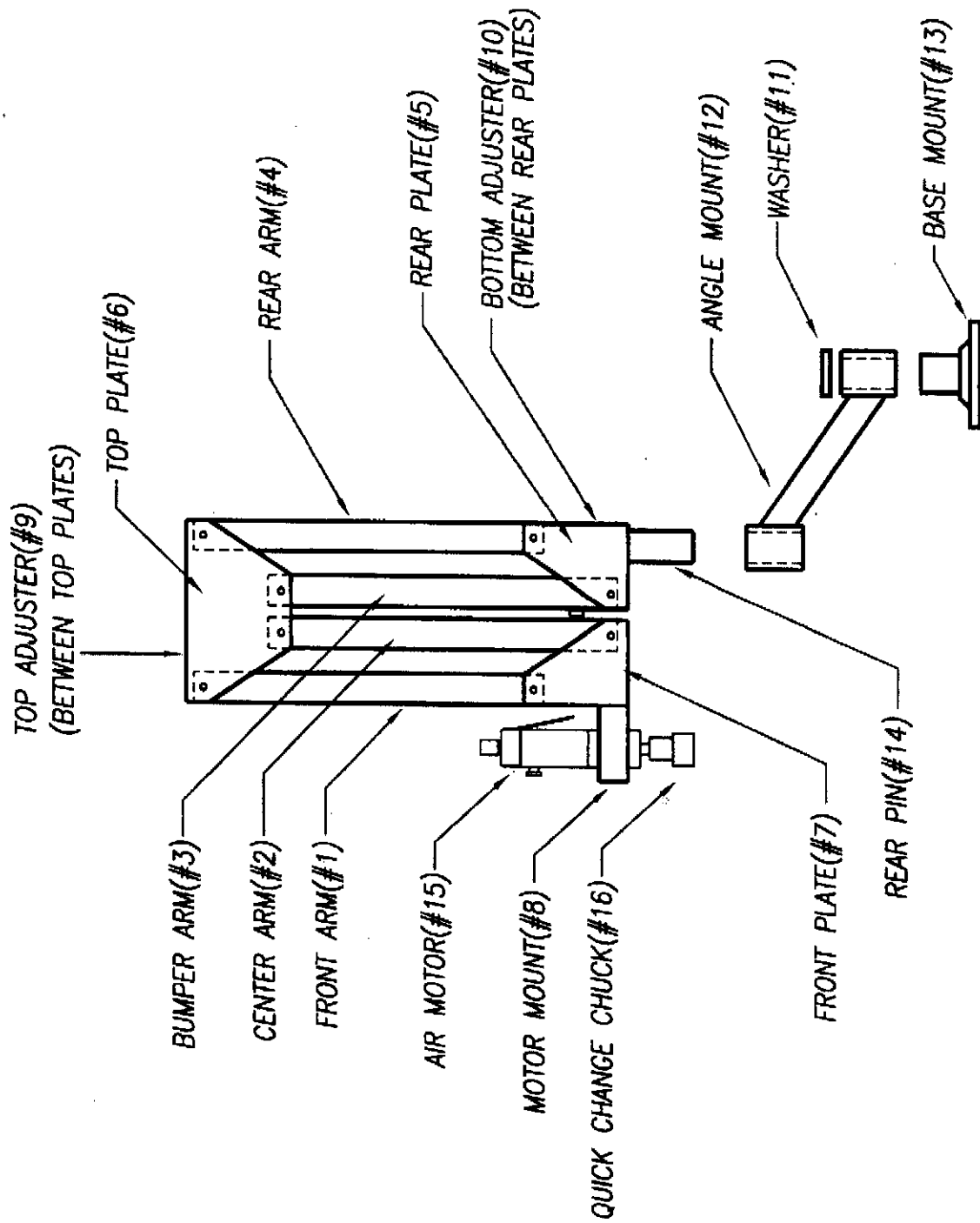
Atlas Perma-Guard	Buna-N
Crylex #5 Cement	Eastman 910
Garlock 98403 (polyurethane)	Keystone penetrating oil No. 2
Kano Kroil	Loctite Teflon sealant
Loctite 271, 290, 601	National Compound N11
Minnesota Rubber 366Y	Parco 1306 Neoprene
Nylock VC-3	Petron PD287
Permabond 910	Stauffer Chemical Fyrquel 150
Prestone	Stillman SR 513-70 (neoprene)
Stillman SR 269-75 (polyurethane)	Telar
Tannergas	Titon
Vibra-Tite	Zerex

Because all substances harmful to polycarbonate plastic cannot be listed, consult a Mobay Chemical or General Electric office for further information.

Midwest Specialties has the following oil available in one gallon capacity:

EP Hydraulic Oil 32(light), 135-165 SUS@100 degrees Fahrenheit. The part number is EP-32.

FLEXARM PARTS DIAGRAM FOR MODELS S36 & M60



<i>FLEXARM S-36 & M-60 PARTS LIST</i>						
ITEM		PART #	DESCRIPTION	PRICE EACH	QTY	EXTEN
1		05310	S36 FRONT ARM (without bushings & pins)			
4		05315	S36 REAR ARM (without bushings & pins)			
2		05320	S36 CENTER ARM (without bushings & pins)			
1		05330	M60 FRONT ARM (without bushings & pins)			
4		05335	M60 REAR ARM (without bushings & pins)			
2		05340	M60 CENTER ARM (without bushings & pins)			
		0150M	ARM BUSHING (4 USED PER ARM)			
		14700	ARM PIN (STAINLESS STEEL WITH 1/4-20 THREADS)			
		0372M	ARM SCREW (1/4-20 WITH LOCTITE PATCH)			
3		0378M	ARM BUMPER			
6		06100	TOP PLATE, RIGHT SIDE			
6		06150	TOP PLATE, LEFT SIDE			
7		07210	FRONT PLATE, RIGHT SIDE			
7		07215	FRONT PLATE, LEFT SIDE			
5		07220	REAR PLATE, RIGHT SIDE			
5		07225	REAR PLATE, LEFT SIDE			
8		04400	MOTOR MOUNT (FOR: 400 RPM THRU 5000 RPM)			
8		04500	MOTOR MOUNT (FOR: 225 RPM MOTOR)			
8		04600	MOTOR MOUNT, 2-PIECE V-BLOCK (1"-2" DIAM. TOOLS)			
10		13550	BOTTOM ADJUSTER ASSY (swivel bar, stud, clevis, dowel pin)			
9		13500	TOP ADJUSTER ASSY (swivel bar, stud, clevis, dowel pin)			
11		14900	WASHER FOR ANGLE MOUNT			
12		15300	ANGLE MOUNT			
12		15310	BEARING ANGLE MOUNT (WITHOUT BEARINGS)			
		0382M	BEARING ONLY FOR ANGLE MOUNT (2 REQ'D)			
13		15100	BASE MOUNT			
14		15200	STANDARD REAR PIN FOR UNIT			
14		15250	BEARING REAR PIN FOR UNIT			
16		12100	QUICK CHANGE CHUCK (3/8-24 FEMALE THREADS)			
16		12200	QUICK CHANGE CHUCK (1/2-20 FEMALE THREADS)			
16		12300	QUICK CHANGE CHUCK (B12 TAPER, FEMALE)			
		0096M	EJECTOR FOR QUICK CHANGE CHUCK. SPECIFY SCM OR OLD MIDWEST STYLE			
		0097M	LARGE SPRING FOR CHUCK COLLAR. SPECIFY SCM OR OLD MIDWEST STYLE			
		0098M	SPRING FOR CHUCK EJECTOR. SPECIFY SCM OR OLD MIDWEST STYLE			
		0099M	OUTER COLLAR FOR QUICK CHANGE CHUCK. SPECIFY SCM OR OLD MIDWEST STYLE			
		0100M-SCM	SHOULDER BOLT FOR SCM CHUCK EJECTOR			
		0101M-SCM	BALL BEARING FOR SCM / CENTAUR CHUCK (4.5mm)			

	0102M-SCM	RETAINING RING FOR SCM CHUCK COLLAR			
	0100M	SHOULDER BOLT FOR OLD MIDWEST CHUCK EJECTOR			
	0101M	BALL BEARING FOR OLD MIDWEST CHUCK (4.13-4.2mm)			
	0102M	<u>SNAP RING</u> FOR OLD MIDWEST QUICK CHANGE CHUCK			
	164100-SUB1	ADAPTER FOR DRILL CHUCK (1/2-20 MALE THREADS)			
15	FX900100	225 RPM MOTOR (3/4" CAPACITY IN MILD STEEL)			
15	FX900110	400 RPM MOTOR (9/16" CAPACITY IN MILD STEEL)			
15	FX900120	600 RPM MOTOR (3/8" CAPACITY IN MILD STEEL)			
15	FX900130	1000 RPM MOTOR (5/16" CAPACITY IN MILD STEEL)			
15	FX900140	1500 RPM MOTOR (1/4" CAPACITY IN MILD STEEL)			
15	FX900150	2500 RPM MOTOR (WITH 3/8" DRILL CHUCK)			
15	FX900160	5000 RPM MOTOR (WITH 3/8" DRILL CHUCK)			
	0513M	RESERVOIR <u>BOWL</u> FOR TAP LUBRICATOR, 10 OZ.			
	FX900080-2	CONTINUOUS FLOW ATL PUMP WITH HOSE, BLOCK, NOZZLE AND O-RINGS SPECIFY MODEL			
	FX900080	<u>FLOW VALVE</u> FOR CONTIN. FLOW (OLD #FX900075-4)			
	FX900075-1	FREQUENCY GENERATOR (BASE SOLD BELOW)			
	0500M	FREQUENCY GENERATOR BASE ONLY			
	FX900076	<u>NOZZLE ASSY.</u> FOR CONTINUOUS FLOW ATL (INCLUDES HOSE, BLOCK, NOZZLE AND ORINGS) SPECIFY MODEL			
	FX900050-S2	STANDARD MAGNET FLANGE			
	FX900050-S4	BEARING MAGNET FLANGE			
	0382M	BEARING ONLY FOR MAGNET FLANGE (2 REQ'D)			
	360019	ARM STRAP (FOR UNITS WITH A MAGNET)			
		CYLINDER C16-_____(135# OR LESS)			
		CYLINDER C16-_____(135# OR LESS)			
		CYLINDER C16-_____(140# OR MORE)			
		CYLINDER C16-_____(140# OR MORE)			
	0391	FILTER/LUBRICATOR ASSEMBLY (with elbow fitting)			
	0384M	STRAIGHT PUSH-RELEASE FITTING FOR AIR MOTOR			
	0385M	ELBOW PUSH-RELEASE FITTING FOR F/L			
	360023	HOSE FOR S36, BLACK NYLON, 65" Long (sold by the inch)			
	360023	HOSE FOR M60, BLACK NYLON, 87" Long (sold by the inch)			
	FX900240	SLEEVE FOR 400 MOTOR			
	0380M	SLEEVE FOR DIE GRINDER			
	360037	SLEEVE FOR HELICOIL			

Distributed by Ergonomic Partners

Sales@ErgonomicPartners.com

www.ErgonomicPartners.com

Tel: (314) 884-8884