

# OPERATOR'S MANUAL

# 01XX-XXX9-0XX

INCLUDING: APPLICATION, LUBRICATION, INSTALLATION & SERVICE

RELEASED: 12-1-78

REVISED: 10-11-04

(REV. C)

## MICRO-AIR CYLINDERS



**READ THIS MANUAL CAREFULLY BEFORE INSTALLING,  
OPERATING OR SERVICING THIS EQUIPMENT.**

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.



**Rated Pressure: 200 P.S.I. (14 Bar) Maximum**

**Temperature Ratings: 0° to 180° F (-18° to 82° C)**

### MODEL DESCRIPTION CHART

01 XX - X X X9 - 0 XX

**BORE SIZE**

51 - 1/2 inch  
76 - 3/4 inch  
18 - 1-1/8 inch

**CYLINDER TYPE**

1 - Double Acting, Double End Mount  
5 - Double Acting, Nose Mount

**"O" RING MATERIAL**

0 - Nitrile  
3 - Viton

**STROKE LENGTH**

**WHOLE INCHES**

0 = 0 in  
1 = 1 in  
2 = 2 in  
3 = 3 in  
4 = 4 in  
5 = 5 in  
6 = 6 in

**FRACTIONS**

0 = None  
1 = 1/8 in  
2 = 1/4 in  
3 = 3/8 in  
4 = 1/2 in  
5 = 5/8 in  
6 = 3/4 in  
7 = 7/8 in

**MOUNTING STYLE**

09 - Basic - Universal Mount  
29 - Rear Port

# Warnings and Service Information

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## **WARNING**

Improper application, installation, service or maintenance of ARO® cylinders may create a hazardous condition, which may in turn cause bodily injury as well as shortened product life. Contact The Aro Corporation for special applications.

## **APPLICATION**

Micro-Air cylinders are a series of round line repairable cylinders designed for medium duty applications on air pressures to 200 P.S.I.G. The Micro-Air cylinder is offered in the following three bore sizes - 1/2", 3/4" and 1-1/8" - with seven mounting options as shown in ARO Pneumatic Valves and Cylinders Catalog 0020-M.

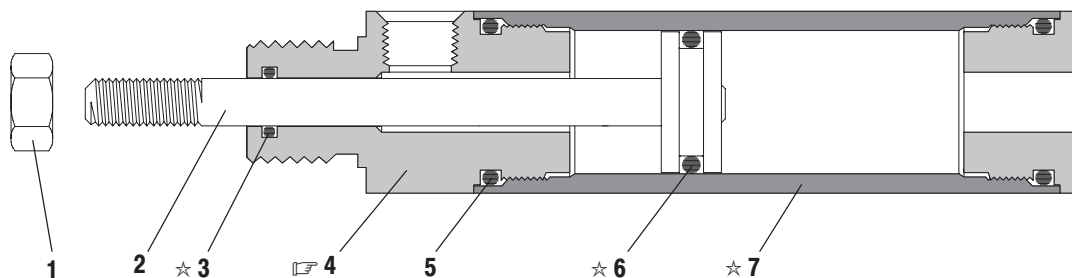
## **OPERATION AND MAINTENANCE**

Pneumatic cylinders should be lubricated to provide maximum cycle life. Micro-Air cylinders are lubricated with Shell Darina, EP Grade, No. 2 grease during assembly at the factory. Factory lubrication will provide a satisfactory amount of cycle life if no additional lubrication is provided. However, we recommend lubrication for any pneumatic system and suggest that you follow the guidelines for types of lubricants which are outlined in all of our catalogs (reference Catalog 0020-M).

Periodic maintenance must be performed to insure maximum product life. Disassembly for cleaning, inspection and relubrication can be performed any time equipment is idle for a short period of time. All metal parts should be cleaned with a non-flammable solvent. All rubber parts should be thoroughly washed with soap and water. Cleaned parts should be rinsed and dried with low pressure air. Any parts which are worn or damaged should be replaced. Selected parts and seals are available in repair kit form.

# PARTS LIST

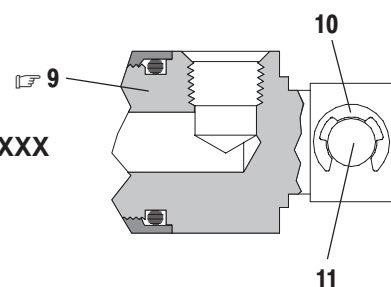
## SERIES 01 CYLINDERS DOUBLE ACTING



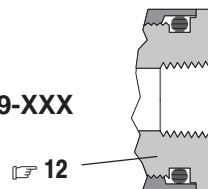
☆ Moderately lubricate (7) barrel i.d., (6) piston seal, and (3) piston rod seal with Shell Darina EP grade #2 grease. Do not lubricate (5) head to barrel seals ("O" rings).

**TORQUE REQUIREMENTS**  
 Model: 01XX-1X09-XXX - Tighten (4) front head / (7) barrel to 50 in. lbs (5.6 Nm), thread (8) rear head to (7) barrel & back up to align ports.  
 Model: 01XX-5X29-XXX - Tighten both (4 & 12) heads / (7) barrel to 50 in. lbs (5.6 Nm).

MODELS: 01XX-1X09-XXX



MODELS: 01XX-5X29-XXX



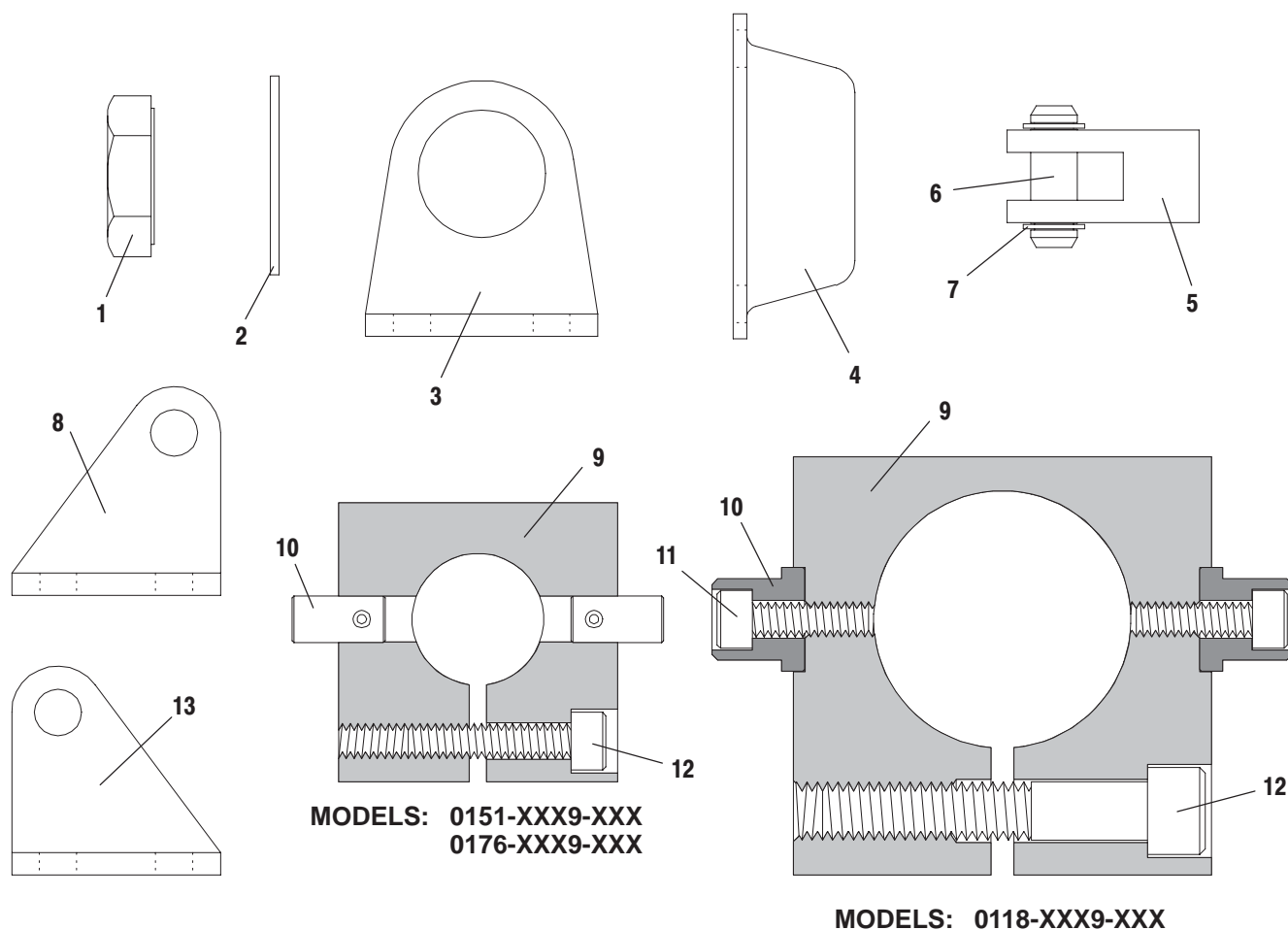
| PARTS LIST |                                |     |                             |                              |                                |
|------------|--------------------------------|-----|-----------------------------|------------------------------|--------------------------------|
| Item       | Description                    | Qty | 0151- (1/2") Part No.       | 0176- (3/4") Part No.        | 0118- (1-1/8") Part No.        |
| 1          | Rod Nut                        | (1) | Y11-4-C (1/4" - 28)         | Y11-4-C (1/4" - 28)          | Y12-5-C (5/16" - 18)           |
| * 2        | Piston Rod Assembly            | (1) | RA0151-XXX                  | RA0176-XXX                   | RA0118-XXX                     |
| ✓ 3        | "O" Ring (Piston Rod Seal)     | (1) | Y325-10 (1/16" x 3/8" o.d.) | Y325-10 (1/16" x 3/8" o.d.)  | Y325-11 (1/16" x 7/16" o.d.)   |
| 4          | Front Head                     | (1) | 20021                       | 20064                        | 20090                          |
| ✓ 5        | "O" Ring (Head Seal)           | (2) | Y325-14 (1/16" x 5/8" o.d.) | Y325-115 (3/32" x 7/8" o.d.) | Y325-121 (3/32" x 1-1/4" o.d.) |
| ✓ 6        | "O" Ring (Piston Seal)         | (1) | Y325-12 (1/16" x 1/2" o.d.) | Y325-113 (3/32" x 3/4" o.d.) | Y325-212 (1/8" x 1-1/8" o.d.)  |
| * 7        | Barrel                         | (1) | 20022-XXX                   | 20065-XXX                    | 20094-XXX                      |
| 9          | Rear Head (Rear Pivot)         | (1) | 20028                       | 20069                        | 20092                          |
| 10         | "E" Retaining Ring (1/4" dia.) | (2) | Y180-25                     | Y180-25                      | Y180-25                        |
| 11         | Pivot Pin                      | (1) | 4042                        | 4042                         | 4042                           |
| 12         | Rear Head (Rear Port)          | (1) | 20606                       | 20607                        | 20608                          |
| ✓          | Repair Kit                     |     | RK0151-10                   | RK0176-10                    | RK0118-10                      |
|            | Repair Kit (Viton "O" Rings)   |     | RK0151-13                   | RK0176-13                    | RK0118-13                      |

\* Specify Stroke Length

# PARTS LIST

## SERIES 01 CYLINDERS

### CYLINDER MOUNTING HARDWARE



| PARTS LIST |                                |                           |                           |                              |
|------------|--------------------------------|---------------------------|---------------------------|------------------------------|
| Item       | Description                    | 0151- (1/2") Part No.     | 0176- (3/4") Part No.     | 0118- (1-1/8") Part No.      |
| 1          | Mounting Nut                   | 4014                      | 4014                      | 4014                         |
| 2          | Lockwasher (5/8")              | Y1-962-C                  | Y1-962-C                  | Y1-962-C                     |
| 3          | "L" Mount                      | 4032                      | 4032                      | 4032                         |
| 4          | Flange                         | 4029                      | 4029                      | 4029                         |
| 5          | Clevis                         | 4044                      | 4044                      | 11039                        |
| 6          | Pivot Pin                      | 4043                      | 4043                      | 4043                         |
| 7          | "E" Retaining Ring (1/4" dia.) | Y180-25                   | Y180-25                   | Y180-25                      |
| 8          | Clevis Bracket (Threaded Tang) | 4039                      | 4039                      | 4039                         |
| 9          | Trunnion                       | 3949                      | 4049                      | 20096                        |
| 10         | Boss                           | (Included in 3949)        | (Included in 4049)        | 1247                         |
| 11         | Screw                          | N. A.                     | N. A.                     | Y154-53 (#10 - 24 x 5/8")    |
| 12         | Screw                          | Y154-55 (#10 - 24 x 7/8") | Y154-55 (#10 - 24 x 7/8") | Y99-55 (5/16" - 18 x 1-3/4") |
| 13         | Trunnion Bracket - Left        | 4038                      | 4038                      | N. A.                        |
| 8          | Trunnion Bracket - Right       | 4039                      | 4039                      | N. A.                        |