

## MILLER

| Kit Type                         |                                                                 | Page    |
|----------------------------------|-----------------------------------------------------------------|---------|
| <b>Rod Kit, Iron Gland</b>       | Star Bushing - A, J, & H Cylinders                              | 52      |
|                                  | Pneumatic - A & C Cylinders                                     | 53      |
|                                  | Hydraulic - AJ, J, M & H Cylinders                              | 54      |
|                                  | HV Cylinders - Retainer Held - With Retainer & Without Retainer | 55      |
|                                  | HV Cylinders-Bolted                                             | 56      |
| <b>Star Rod Kits</b>             | A, J, & H Cylinders                                             | 57      |
| <b>Rod Seal Cage Assembly</b>    | Hydraulic                                                       | 58      |
| <b>Hat Packing</b>               | PTFE & Nitrile                                                  | 59      |
| <b>PTFE Wiper</b>                | "U" Style - A, C, J, M, & H Cylinders                           | 60      |
| <b>Iron Gland</b>                | Star Bushing Style A, J, & H Cylinders - Retainer Held & Bolted | 61      |
|                                  | A, C, J, M, & H Cylinders                                       | 62      |
|                                  | HV Cylinders                                                    | 63      |
| <b>Retainer</b>                  | A, C, J, M, H & HV Cylinders                                    | 64      |
| <b>Caged Assembly Components</b> | Rod Seal Cage, Wave Spring, & Bronze Pressure Ring              | 64      |
| <b>Piston Kits</b>               | A, J, & H Series Cylinders                                      | 65      |
| <b>Piston Kits</b>               | HV Series Cylinders                                             | 66      |
| <b>PTFE Tube Seal Cord</b>       | A, C, J, M, & H Cylinders                                       | 66      |
| <b>Piston U-seals</b>            | All Current Style Cylinders                                     | 67      |
| <b>Wear Rings</b>                | Air & Hydraulic Service                                         | 68      |
| <b>PTFE Tube End Seals</b>       | Continuous                                                      | 69      |
|                                  | Various Kits                                                    | 69      |
|                                  | Strip PTFE                                                      | 70      |
| <b>Follower Seals</b>            | PTFE                                                            | 70      |
| <b>Piston Cups</b>               | A, AJ, J, JW, H, & HW Cylinders                                 | 71      |
| <b>Repair Kits</b>               | By Part Number                                                  | 72 - 79 |

## ORTMAN

| Kit Type           |              | Page |
|--------------------|--------------|------|
| <b>Ortman Kits</b> | Various Kits | 80   |

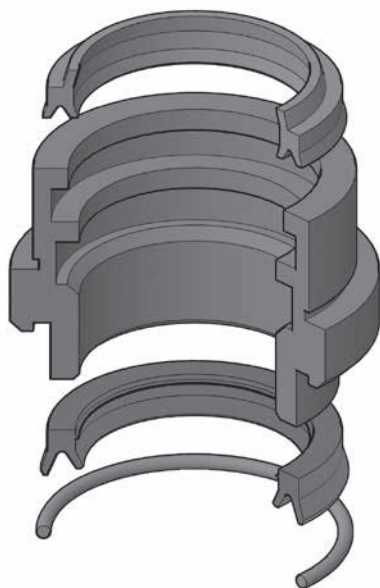
## MILLER

### Star Bushing Rod Kit, Iron Gland

A, J, & H Cylinders

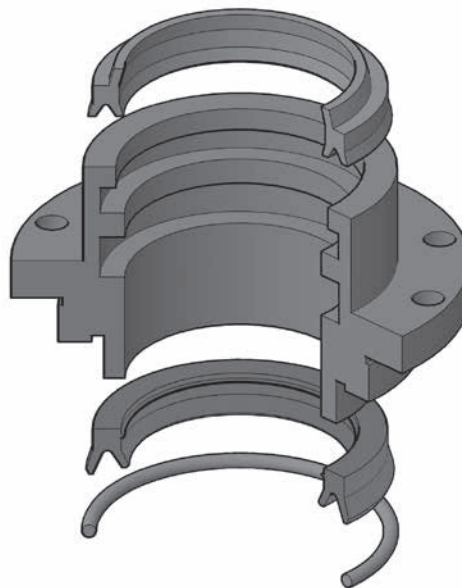
1998 Style Retainer Held

1998 Style Bolted



**Kit Includes:**

1 XNBR Wiper  
1 Retainer Held Star Bushing  
1 URE Rod Seal  
1 NBR O-ring



**Kit Includes:**

1 XNBR Wiper  
1 Bolted Star Bushing  
1 URE Rod Seal  
1 NBR O-ring

| Rod Dia. | Kit #             | Kit #             |
|----------|-------------------|-------------------|
| 5/8"     | MLR-051-KR074-063 | MLR-051-KR075-063 |
| 1"       | MLR-051-KR074-100 | MLR-051-KR075-100 |
| 1-3/8"   | MLR-051-KR074-138 | MLR-051-KR075-138 |
| 1-3/4"   | —                 | MLR-051-KR075-175 |
| 2"       | —                 | MLR-051-KR075-200 |
| 2-1/2"   | —                 | MLR-051-KR075-250 |
| 3"       | —                 | MLR-051-KR075-300 |
| 3-1/2"   | —                 | MLR-051-KR075-350 |
| 4"       | —                 | MLR-051-KR075-400 |
| 4-1/2"   | —                 | MLR-051-KR075-450 |
| 5"       | —                 | MLR-051-KR075-500 |
| 5-1/2"   | —                 | MLR-051-KR075-550 |

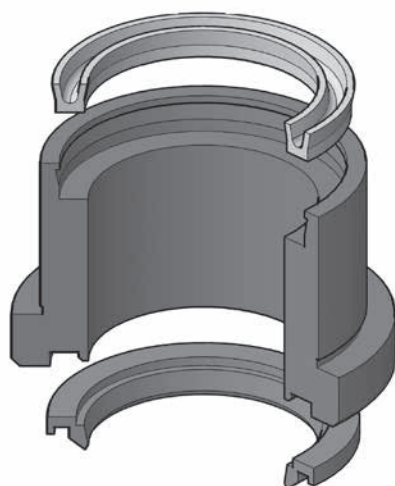
Bolted bushings from: 5/8" to 1-3/4" have 4 bolt holes  
2" to 4-1/2" have 8 bolt holes  
5" to 5-1/2" have 12 bolt holes

## MILLER

### Pneumatic Rod Kit, Iron Gland

#### A & C Cylinders

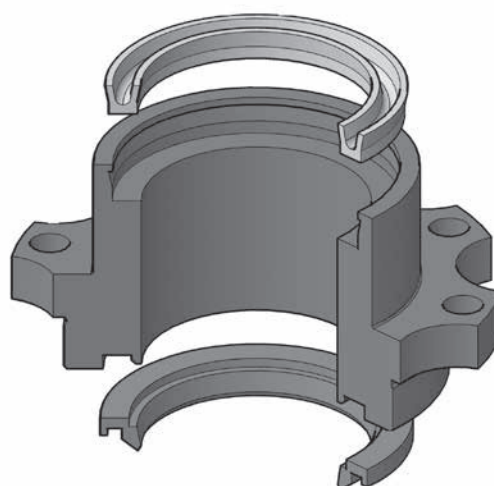
##### Retainer Held



**Kit Includes:**

- 1 PTFE Wiper
- 1 Retainer Held Iron Gland
- 1 NBR Hat Packing

##### Bolted



**Kit Includes:**

- 1 PTFE Wiper
- 1 Bolted Iron Gland
- 1 NBR Hat Packing

| Rod Dia. | Kit #             | Kit #             |
|----------|-------------------|-------------------|
| 5/8"     | MLR-051-KR010-063 | MLR-051-KR011-063 |
| 1"       | MLR-051-KR010-100 | MLR-051-KR011-100 |
| 1-3/8"   | MLR-051-KR010-138 | MLR-051-KR011-138 |
| 1-3/4"   | MLR-051-KR010-175 | MLR-051-KR011-175 |
| 2"       | MLR-051-KR010-200 | MLR-051-KR011-200 |
| 2-1/2"   | MLR-051-KR010-250 | MLR-051-KR011-250 |
| 3"       | MLR-051-KR010-300 | MLR-051-KR011-300 |

Bolted bushings from: 5/8" to 1-3/4" have 4 bolt holes  
 2" to 4-1/2" have 8 bolt holes  
 5" to 5-1/2" have 12 bolt holes

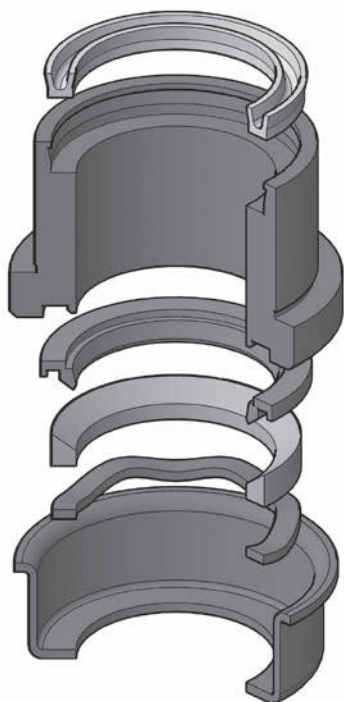
## MILLER

### Hydraulic Rod Kit, Iron Gland

AJ, J, M, & H Cylinders

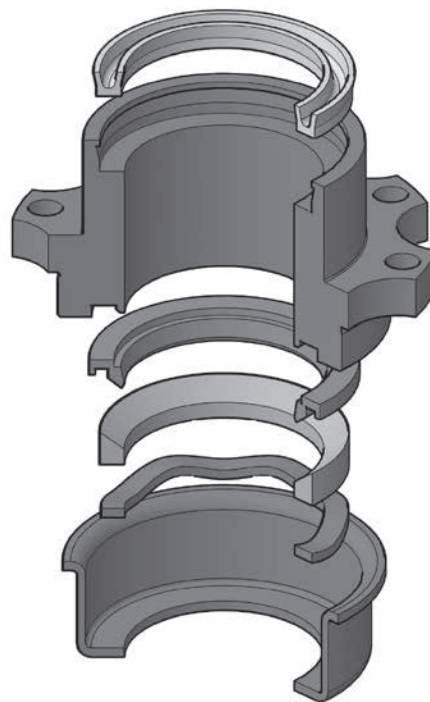
Retainer Held

Bolted



**Kit Includes:**

- 1 PTFE Wiper
- 1 Retainer Held Iron Gland
- 1 PTFE Hat Packing
- 1 Bronze Pressure Ring
- 1 Wave Spring
- 1 Cage



**Kit Includes:**

- 1 PTFE Wiper
- 1 Bolted Iron Gland
- 1 PTFE Hat Packing
- 1 Bronze Pressure Ring
- 1 Wave Spring
- 1 Cage

| Rod Dia. | Kit #             | Kit #             |
|----------|-------------------|-------------------|
| 5/8"     | MLR-051-KR014-063 | MLR-051-KR015-063 |
| 1"       | MLR-051-KR014-100 | MLR-051-KR015-100 |
| 1-3/8"   | MLR-051-KR014-138 | MLR-051-KR015-138 |
| 1-3/4"   | MLR-051-KR014-175 | MLR-051-KR015-175 |
| 2"       | MLR-051-KR014-200 | MLR-051-KR015-200 |
| 2-1/2"   | MLR-051-KR014-250 | MLR-051-KR015-250 |
| 3"       | MLR-051-KR014-300 | MLR-051-KR015-300 |

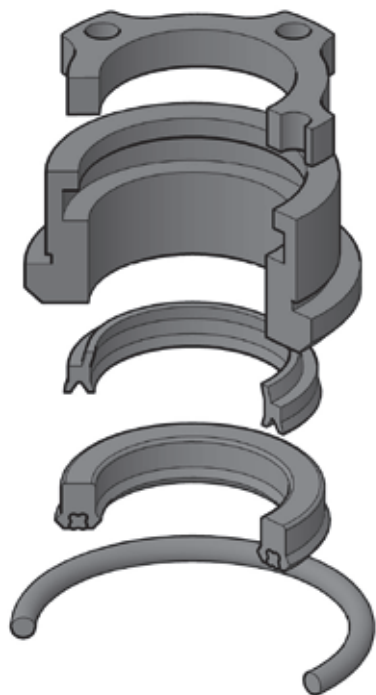
Bolted bushings from: 5/8" to 1-3/4" have 4 bolt holes  
2" to 4-1/2" have 8 bolt holes  
5" to 5-1/2" have 12 bolt holes

## MILLER

### Rod Kit, Iron Gland

#### HV Cylinders - Retainer Held

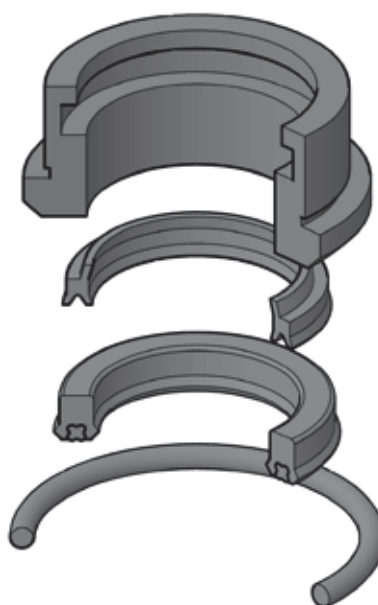
##### With Retainer



**Kit Includes:**

- 1 NBR Wiper
- 1 Retainer Held Gland
- 1 Retainer Ring
- 1 URE Rod Seal
- 1 NBR O-ring

##### Without Retainer



**Kit Includes:**

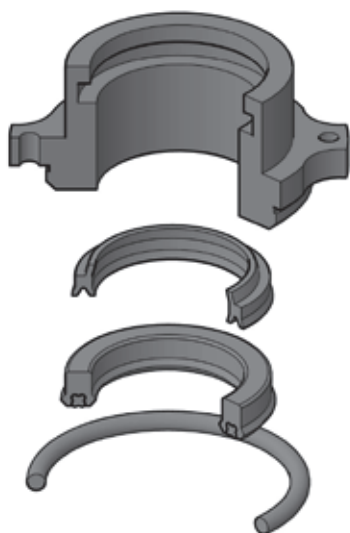
- 1 NBR Wiper
- 1 Retainer Held Gland
- 1 URE Rod Seal
- 1 NBR O-ring

| Rod Dia. | Kit #             | Kit #             |
|----------|-------------------|-------------------|
| 5/8"     | MLR-051-KR065-063 | MLR-051-KR064-063 |
| 1"       | MLR-051-KR065-100 | MLR-051-KR064-100 |
| 1-3/8"   | MLR-051-KR065-138 | MLR-051-KR064-138 |

## MILLER

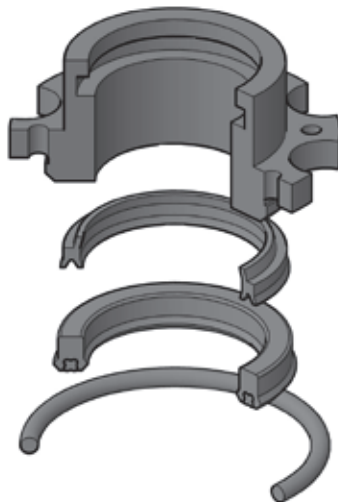
### Rod Kit, Iron Gland

#### HV Cylinders-Bolted



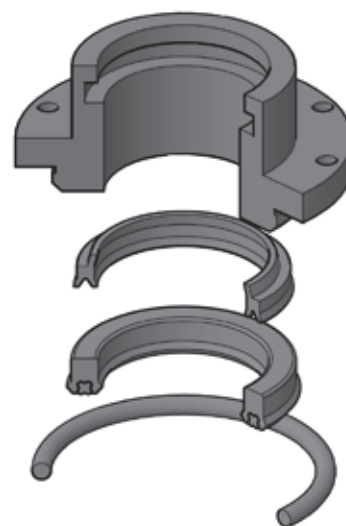
**Kit Includes:**

1 NBR Wiper  
1 Bolted Gland  
1 URE Rod Seal  
1 NBR O-ring



**Kit Includes:**

1 NBR Wiper  
1 Bolted Gland  
1 URE Rod Seal  
1 NBR O-ring



**Kit Includes:**

1 NBR Wiper  
1 Bolted Gland  
1 URE Rod Seal  
1 NBR O-ring

| Rod Dia. | Kit #             | Kit #             | Kit #             |
|----------|-------------------|-------------------|-------------------|
| 1-3/4"   | MLR-051-KR065-175 | —                 | —                 |
| 2"       | —                 | MLR-051-KR065-200 | —                 |
| 2-1/2"   | —                 | —                 | MLR-051-KR065-250 |
| 3        | —                 | —                 | MLR-051-KR065-300 |
| 3-1/2"   | —                 | —                 | MLR-051-KR065-350 |

## MILLER

### Star Rod Kits

#### A, J, & H Cylinders Star Kits

| Rod Dia. | Kit #             |
|----------|-------------------|
| 5/8"     | MLR-051-KR080-063 |
| 1"       | MLR-051-KR080-100 |
| 1-3/8"   | MLR-051-KR080-138 |
| 1-3/4"   | MLR-051-KR080-175 |
| 2"       | MLR-051-KR080-200 |
| 2-1/2"   | MLR-051-KR080-250 |
| 3"       | MLR-051-KR080-300 |
| 3-1/2"   | MLR-051-KR080-350 |
| 4"       | MLR-051-KR080-400 |
| 4-1/2"   | MLR-051-KR080-450 |
| 5"       | MLR-051-KR080-500 |
| 5-1/2"   | MLR-051-KR080-550 |

**Kit Includes:**  
1 XNBR Wiper  
1 URE Rod Seal  
1 NBR O-ring



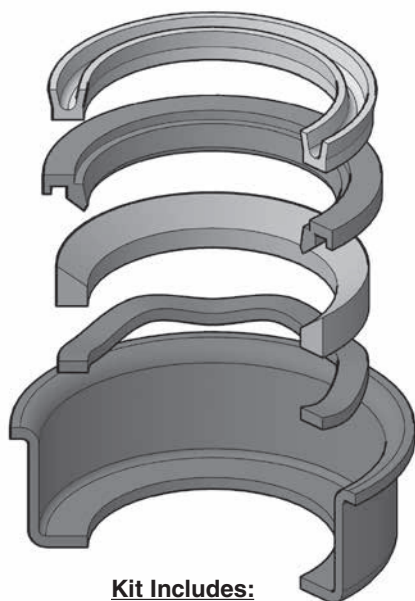
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### Hydraulic Rod Seal Cage Assembly

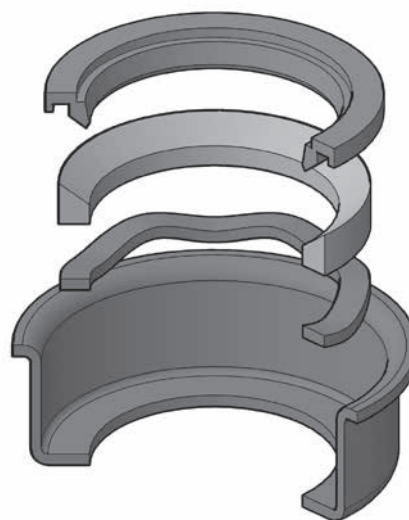
#### AJ, J, M, & H Cylinders



**Kit Includes:**

- 1 PTFE Wiper
- 1 PTFE Hat Packing
- 1 Bronze Pressure Ring
- 1 Wave Spring
- 1 Cage

#### Boosters & Tandems



**Kit Includes:**

- 1 PTFE Hat Packing
- 1 Bronze Pressure Ring
- 1 Wave Spring
- 1 Cage
- No Wiper

| Rod Dia. | Kit #             | Kit #             |
|----------|-------------------|-------------------|
| 5/8"     | MLR-051-KR012-063 | MLR-051-KR024-063 |
| 1"       | MLR-051-KR012-100 | MLR-051-KR024-100 |
| 1-3/8"   | MLR-051-KR012-138 | MLR-051-KR024-138 |
| 1-3/4"   | MLR-051-KR012-175 | MLR-051-KR024-175 |
| 2"       | MLR-051-KR012-200 | MLR-051-KR024-200 |
| 2-1/2"   | MLR-051-KR012-250 | MLR-051-KR024-250 |
| 3"       | MLR-051-KR012-300 | MLR-051-KR024-300 |



## MILLER

### Hat Packing

**For Hydraulic Service  
PTFE**

**For Air & Water Service  
Nitrile**



| Rod Dia. | Part #             | Part #            |
|----------|--------------------|-------------------|
| 5/8"     | MLR-051-RS007-063  | MLR-051-RS014-063 |
| 1"       | MLR-051-RS007-100  | MLR-051-RS014-100 |
| 1-3/8"   | MLR-051-RS007-138  | MLR-051-RS014-138 |
| 1-3/4"   | MLR-051-RS007-175  | MLR-051-RS014-175 |
| 2"       | MLR-051-RS007-200  | MLR-051-RS014-200 |
| 2-1/2"   | MLR-051-RS007-250  | MLR-051-RS014-250 |
| 3"       | MLR-051-RS007-300  | MLR-051-RS014-300 |
| 3-1/2"   | MLR-051-RS007-350  | MLR-051-RS014-350 |
| 4"       | MLR-051-RS007-400  | MLR-051-RS014-400 |
| 4-1/2"   | MLR-051-RS007-450  | MLR-051-RS014-450 |
| 5"       | MLR-051-RS007-500  | MLR-051-RS014-500 |
| 5-1/2"   | MLR-051-RS007-550  | MLR-051-RS014-550 |
| 7"       | MLR-051-RS007-700  | —                 |
| 8"       | MLR-051-RS007-800  | —                 |
| 9"       | MLR-051-RS007-900  | —                 |
| 10"      | MLR-051-RS007-1000 | —                 |

## MILLER

### PTFE Wiper “U” Style

A, C, J, M, & H Cylinders

| Rod Dia. | Part #             |
|----------|--------------------|
| 5/8"     | MLR-051-WP001-063  |
| 1"       | MLR-051-WP001-100  |
| 1-3/8"   | MLR-051-WP001-138  |
| 1-3/4"   | MLR-051-WP001-175  |
| 2"       | MLR-051-WP001-200  |
| 2-1/2"   | MLR-051-WP001-250  |
| 3"       | MLR-051-WP001-300  |
| 3-1/2"   | MLR-051-WP001-350  |
| 4"       | MLR-051-WP001-400  |
| 4-1/2"   | MLR-051-WP001-450  |
| 5"       | MLR-051-WP001-500  |
| 5-1/2"   | MLR-051-WP001-550  |
| 7"       | MLR-051-WP001-700  |
| 8"       | MLR-051-WP001-800  |
| 9"       | MLR-051-WP001-900  |
| 10"      | MLR-051-WP001-1000 |



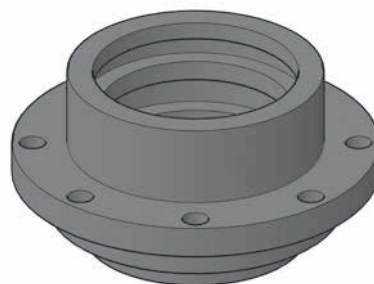
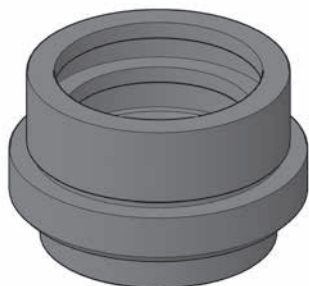
## MILLER

### Iron Gland

#### Star Bushing Style A, J, & H Cylinders

Retainer Held

Bolted



| Rod Dia. | Part #            | Part #            |
|----------|-------------------|-------------------|
| 5/8"     | MLR-050-BU100-063 | MLR-050-BU101-063 |
| 1"       | MLR-050-BU100-100 | MLR-050-BU101-100 |
| 1-3/8"   | MLR-050-BU100-138 | MLR-050-BU101-138 |
| 1-3/4"   | —                 | MLR-050-BU101-175 |
| 2"       | —                 | MLR-050-BU101-200 |
| 2-1/2"   | —                 | MLR-050-BU101-250 |
| 3"       | —                 | MLR-050-BU101-300 |
| 3-1/2"   | —                 | MLR-050-BU101-350 |
| 4"       | —                 | MLR-050-BU101-400 |
| 4-1/2"   | —                 | MLR-050-BU101-450 |
| 5"       | —                 | MLR-050-BU101-500 |
| 5-1/2"   | —                 | MLR-050-BU101-550 |

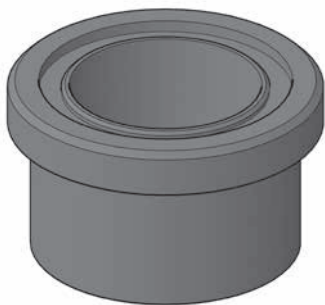
Bolted bushings from: 5/8" to 1-3/4" have 4 bolt holes  
 2" to 4-1/2" have 8 bolt holes  
 5" to 5-1/2" have 12 bolt holes

## MILLER

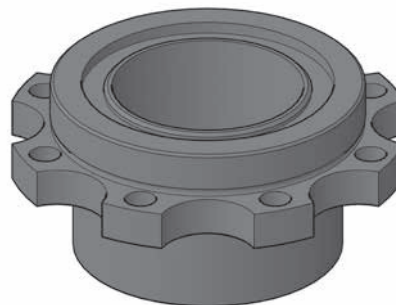
### Iron Gland

#### A, C, J, M, & H Cylinders

##### Retainer Held



##### Bolted



| Rod Dia. | Part #            | Part #            |
|----------|-------------------|-------------------|
| 5/8"     | MLR-050-BU022-063 | MLR-050-BU024-063 |
| 1"       | MLR-050-BU022-100 | MLR-050-BU024-100 |
| 1-3/8"   | MLR-050-BU022-138 | MLR-050-BU024-138 |
| 1-3/4"   | MLR-050-BU022-175 | MLR-050-BU024-175 |
| 2"       | MLR-050-BU022-200 | MLR-050-BU024-200 |
| 2-1/2"   | MLR-050-BU022-250 | MLR-050-BU024-250 |
| 3"       | MLR-050-BU022-300 | MLR-050-BU024-300 |

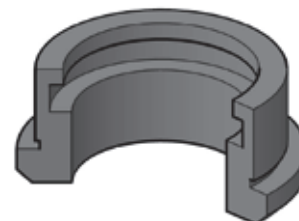
Bolted bushings from: 5/8" to 1-3/4" have 4 bolt holes  
 2" to 4-1/2" have 8 bolt holes  
 5" to 5-1/2" have 12 bolt holes

## MILLER

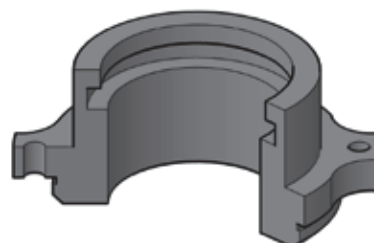
### Iron Gland

#### HV Cylinders

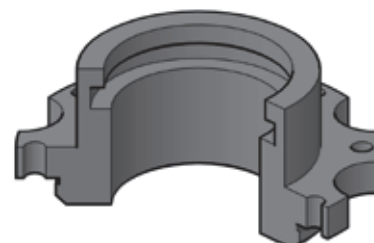
| Rod Dia. | Kit #         |
|----------|---------------|
| 5/8"     | MLR-RG065-063 |
| 1"       | MLR-RG065-100 |
| 1-3/8"   | MLR-RG065-138 |



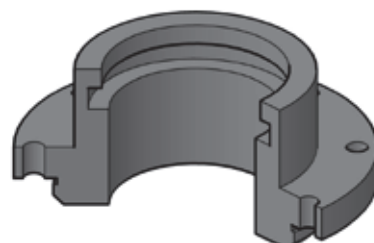
| Rod Dia. | Kit #         |
|----------|---------------|
| 1-3/4"   | MLR-RG065-175 |



| Rod Dia. | Kit #         |
|----------|---------------|
| 2"       | MLR-RG065-200 |



| Rod Dia. | Kit #         |
|----------|---------------|
| 2-1/2"   | MLR-RG065-250 |
| 3"       | MLR-RG065-300 |
| 3-1/2"   | MLR-RG065-350 |



## MILLER

### Retainer

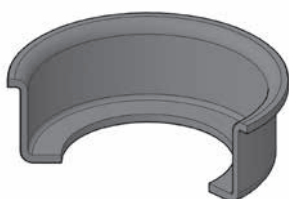
A, C, J, M, H & HV Cylinders

| Rod Dia. | Part #            |
|----------|-------------------|
| 5/8"     | MLR-050-RT005-063 |
| 1"       | MLR-050-RT005-100 |
| 1-3/8"   | MLR-050-RT005-138 |



### Caged Assembly Components

#### Rod Seal Cage



#### Wave Spring



#### Bronze Pressure Ring



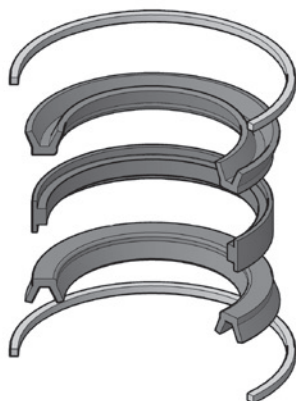
| Rod Dia. | Part #            | Part #            | Part #            |
|----------|-------------------|-------------------|-------------------|
| 5/8"     | MLR-051-CG001-063 | MLR-051-WS004-063 | MLR-051-PG001-063 |
| 1"       | MLR-051-CG001-100 | MLR-051-WS004-100 | MLR-051-PG001-100 |
| 1-3/8"   | MLR-051-CG001-138 | MLR-051-WS004-138 | MLR-051-PG001-138 |
| 1-3/4"   | MLR-051-CG001-175 | MLR-051-WS004-175 | MLR-051-PG001-175 |
| 2"       | MLR-051-CG001-200 | MLR-051-WS003-200 | MLR-051-PG001-200 |
| 2-1/2"   | MLR-051-CG001-250 | MLR-051-WS003-250 | MLR-051-PG001-250 |
| 3"       | MLR-051-CG001-300 | MLR-051-WS003-300 | MLR-051-PG001-300 |

## MILLER

### Piston Kits

#### A Series Cylinders

January '82 to Current

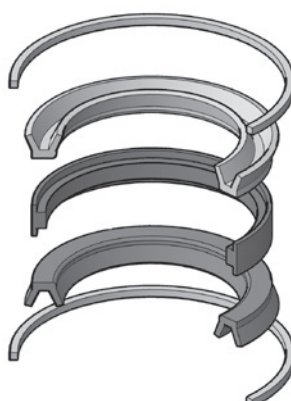


**Kit Includes:**

2 NBR U-seals  
1 Wear Ring  
2 PTFE Tube End Seals  
(wear ring material and profile varies with size)

#### J Series Cylinders

January '81 to Current



**Kit Includes:**

2 U-seals (PTFE up to 5",  
NBR from 6" to 12")  
1 Wear Ring  
2 PTFE Tube End Seals  
(wear ring and u-seal material  
and profile varies with size)

#### H Series Cylinders

January '82 to Current



**Kit Includes:**

2 PTFE U-seals  
1 T-Shape Wear Ring  
2 PTFE Tube End Seals  
(wear ring material varies  
with size)

| Bore Dia. | Kit #              | Kit #              | Kit #              |
|-----------|--------------------|--------------------|--------------------|
| 1-1/2"    | MLR-090-KB001-150  | MLR-091-KB001-150  | MLR-171-KB001-150  |
| 2"        | MLR-090-KB001-200  | MLR-091-KB001-200  | MLR-171-KB001-200  |
| 2-1/2"    | MLR-090-KB001-250  | MLR-091-KB001-250  | MLR-171-KB001-250  |
| 3-1/4"    | MLR-090-KB001-325  | MLR-091-KB001-325  | MLR-171-KB001-325  |
| 4"        | MLR-090-KB001-400  | MLR-091-KB001-400  | MLR-171-KB001-400  |
| 5"        | MLR-090-KB001-500  | MLR-091-KB001-500  | MLR-171-KB001-500  |
| 6"        | MLR-090-KB001-600  | MLR-091-KB001-600  | MLR-171-KB001-600  |
| 7"        | MLR-090-KB001-700  | MLR-091-KB001-700  | MLR-171-KB001-700  |
| 8"        | MLR-090-KB001-800  | MLR-091-KB001-800  | MLR-171-KB001-800  |
| 10"       | MLR-090-KB001-1000 | MLR-091-KB001-1000 | MLR-171-KB001-1000 |
| 12"       | MLR-090-KB001-1200 | MLR-091-KB001-1200 | MLR-171-KB001-1200 |



## MILLER

### Piston Kits

#### HV Series Cylinders Urethane

| Bore Dia. | (URE) Kit #       |
|-----------|-------------------|
| 1-1/2"    | MLR-181-KB001-150 |
| 2"        | MLR-181-KB001-200 |
| 2-1/2"    | MLR-181-KB001-250 |
| 3-1/4"    | MLR-181-KB001-325 |
| 4"        | MLR-181-KB001-400 |
| 5"        | MLR-181-KB001-500 |
| 6"        | MLR-181-KB001-600 |
| 7"        | MLR-181-KB001-700 |
| 8"        | MLR-181-KB001-800 |

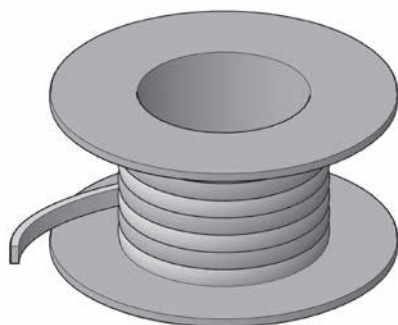


**Kit Includes:**

- 1 URE Piston Seal
- 1 Wear Ring
- 2 PTFE Tube End Seals

### PTFE Tube Seal Cord

#### A, C, J, M, & H Cylinders



| Part #                                | Radial Wall | Width |
|---------------------------------------|-------------|-------|
| MLR-008-SH001-30                      | .030        | .070  |
| Includes: 30' spool of PTFE Head Seal |             |       |
| MLR-SH1-STRIP                         | .030        | .070  |

## MILLER

### Piston U-seals

#### All Current Style Cylinders

##### Buna-N



##### PTFE



| Bore Dia. | Part #             | Part #             |
|-----------|--------------------|--------------------|
| 1-1/2"    | MLR-052-PS025-150  | MLR-052-PS017-150  |
| 2"        | MLR-052-PS025-200  | MLR-052-PS017-200  |
| 2-1/2"    | MLR-052-PS025-250  | MLR-052-PS017-250  |
| 3-1/4"    | MLR-052-PS025-325  | MLR-052-PS017-325  |
| 4"        | MLR-052-PS025-400  | MLR-052-PS017-400  |
| 5"        | MLR-052-PS025-500  | MLR-052-PS017-500  |
| 6"        | MLR-052-PS025-600  | MLR-052-PS017-600  |
| 7"        | MLR-052-PS025-700  | MLR-052-PS017-700  |
| 8"        | MLR-052-PS016-800  | MLR-052-PS017-800  |
| 10"       | MLR-052-PS025-1000 | MLR-052-PS017-1000 |
| 12"       | MLR-052-PS016-1200 | MLR-052-PS017-1200 |
| 14"       | MLR-052-PS025-1400 | MLR-052-PS017-1400 |
| 16"       | MLR-052-PS025-1600 | MLR-052-PS017-1600 |
| 18"       | —                  | MLR-052-PS017-1800 |

## MILLER

### Wear Rings

#### Air Service PTFE



#### Hydraulic Service Acetal



#### Hydraulic Service Bronze



Bore  
Dia.

Part #

Part #

Part #

|        |                       |                      |                        |
|--------|-----------------------|----------------------|------------------------|
| 1-1/2" | MLR-052-WR005-150-25  | MLR-052-WR009-150-25 | —                      |
| 2"     | MLR-052-WR005-200-25  | MLR-052-WR009-200-25 | —                      |
| 2"     | —                     | MLR-052-WR009-200-31 | —                      |
| 2-1/2" | MLR-052-WR005-250-25  | MLR-052-WR009-250-25 | —                      |
| 2-1/2" | —                     | MLR-052-WR009-250-38 | —                      |
| 3-1/4" | MLR-052-WR005-325-25  | MLR-052-WR009-325-25 | —                      |
| 3-1/4" | —                     | MLR-052-WR009-325-50 | —                      |
| 4"     | MLR-052-WR005-400-25  | MLR-052-WR009-400-25 | —                      |
| 4"     | —                     | MLR-052-WR009-400-63 | —                      |
| 5"     | MLR-052-WR005-500-25  | —                    | —                      |
| 5"     | —                     | MLR-052-WR009-500-75 | —                      |
| 6"     | MLR-052-WR005-600-25  | —                    | —                      |
| 6"     | —                     | MLR-052-WR009-600-75 | —                      |
| 7"     | MLR-052-WR005-700-38  | —                    | —                      |
| 7"     | —                     | —                    | MLR-052-WR008-700-75   |
| 8"     | MLR-052-WR005-800-38  | —                    | —                      |
| 8"     | —                     | —                    | MLR-052-WR008-800-125  |
| 10"    | MLR-052-WR005-1000-38 | —                    | —                      |
| 10"    | —                     | —                    | MLR-052-WR008-1000-125 |
| 12"    | MLR-052-WR005-1200-38 | —                    | —                      |
| 12"    | —                     | —                    | MLR-052-WR008-1200-125 |
| 16"    | MLR-052-WR005-1600-50 | —                    | —                      |
| 18"    | MLR-052-WR005-1800-50 | —                    | —                      |
| 20"    | MLR-052-WR005-2000-50 | —                    | —                      |

## MILLER

### Tube End Seals

#### Continuous PTFE

A, C, J, M, ER500, & ER3000

H & ER6000



| Bore Dia. | Part #             | Part #             |
|-----------|--------------------|--------------------|
| 1-1/2"    | MLR-090-ES009-150  | MLR-170-ES010-150  |
| 2"        | MLR-090-ES009-200  | MLR-170-ES010-200  |
| 2-1/2"    | MLR-090-ES009-250  | MLR-170-ES010-250  |
| 3-1/4"    | MLR-090-ES009-325  | MLR-170-ES010-325  |
| 4"        | MLR-090-ES009-400  | MLR-170-ES010-400  |
| 5"        | MLR-090-ES009-500  | MLR-170-ES010-500  |
| 6"        | MLR-090-ES009-600  | MLR-170-ES010-600  |
| 7"        | MLR-090-ES009-700  | MLR-170-ES010-700  |
| 8"        | MLR-090-ES009-800  | MLR-170-ES010-800  |
| 10"       | MLR-090-ES009-1000 | MLR-170-ES010-1000 |
| 12"       | MLR-090-ES009-1200 | MLR-170-ES010-1200 |
| 14"       | MLR-090-ES009-1400 | —                  |

#### Various Kits

| Kit #             | Rod x Bore |
|-------------------|------------|
| MLR-150-KB001-325 | 3-1/4      |
| MLR-150-KB001-500 | 5          |

#### Kit Includes:

2 Leather Piston Cups  
2 PTFE Tube End Seals  
1 PTFE Follower Seal

## MILLER

### Tube End Seals

#### Strip PTFE

A, C, J, M, ER500, & ER3000

H & ER6000



| Bore Dia. | Part #             | Part #             |
|-----------|--------------------|--------------------|
| 1-1/2"    | MLR-090-ES006-150  | MLR-170-ES006-150  |
| 2"        | MLR-090-ES006-200  | MLR-170-ES006-200  |
| 2-1/2"    | MLR-090-ES006-250  | MLR-170-ES006-250  |
| 3-1/4"    | MLR-090-ES006-325  | MLR-170-ES006-325  |
| 4"        | MLR-090-ES006-400  | MLR-170-ES006-400  |
| 5"        | MLR-090-ES006-500  | MLR-170-ES006-500  |
| 6"        | MLR-090-ES006-600  | MLR-170-ES006-600  |
| 7"        | MLR-090-ES006-700  | MLR-170-ES006-700  |
| 8"        | MLR-090-ES006-800  | MLR-170-ES006-800  |
| 10"       | MLR-090-ES006-1000 | MLR-170-ES006-1000 |
| 12"       | MLR-090-ES006-1200 | MLR-170-ES006-1200 |
| 14"       | MLR-090-ES006-1400 | MLR-170-ES006-1400 |
| 18"       | —                  | MLR-170-ES006-1800 |

### PTFE Follower Seals

#### J & H Cylinders

For 3 Piece Pistons From 1956-1977

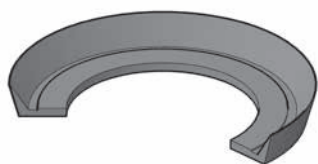


| Part #            | Bore     |                 | I.D.  | Radial Wall | Width |  |
|-------------------|----------|-----------------|-------|-------------|-------|--|
|                   | H        | J               |       |             |       |  |
| MLR-052-FS001-44  | 1-1/2    | 1-1/2, 2, 2-1/2 | 7/16  | 0.070       | 0.070 |  |
| MLR-052-FS001-75  | 2, 2-1/2 | 3-1/4, 4, 5     | 3/4   | 0.070       | 0.070 |  |
| MLR-052-FS001-100 | 3-1/4    | 6, 7, 8         | 1     | 0.142       | 0.142 |  |
| MLR-052-FS001-125 | 4        | 10              | 1-1/4 | 0.142       | 0.142 |  |
| MLR-052-FS001-150 | 5        | 12              | 1-1/2 | 0.142       | 0.142 |  |
| MLR-052-FS001-188 | 6        | 14              | 1-7/8 | 0.142       | 0.142 |  |
| MLR-052-FS001-250 | 8        | -               | 2-1/2 | 0.142       | 0.142 |  |

## MILLER

### Piston Cups

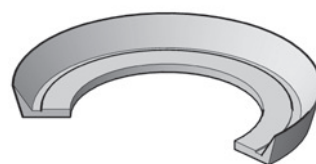
**A, JW, & HW Cylinders  
From 1956-1977  
Nitrile**



**J & H Cylinders  
From 1956-1977  
Leather**



**AJ, J, & H Cylinders  
From 1956-1977  
PTFE**



| Bore Dia. | Part #             | Part #            | Part #             |
|-----------|--------------------|-------------------|--------------------|
| 1-1/2"    | MLR-052-PS001-150  | MLR-052-PS003-150 | MLR-052-PS006-150  |
| 2"        | MLR-052-PS001-200  | MLR-052-PS003-200 | MLR-052-PS006-200  |
| 2-1/2"    | MLR-052-PS001-250  | MLR-052-PS003-250 | MLR-052-PS006-250  |
| 3-1/4"    | MLR-052-PS001-325  | MLR-052-PS003-325 | MLR-052-PS006-325  |
| 4"        | MLR-052-PS001-400  | MLR-052-PS003-400 | MLR-052-PS006-400  |
| 5"        | MLR-052-PS001-500  | MLR-052-PS003-500 | MLR-052-PS006-500  |
| 6"        | MLR-052-PS001-600  | MLR-052-PS003-600 | MLR-052-PS006-600  |
| 7"        | —                  | —                 | MLR-052-PS006-700  |
| 8"        | MLR-052-PS001-800  | —                 | MLR-052-PS006-800  |
| 10"       | MLR-052-PS001-1000 | —                 | MLR-052-PS006-1000 |
| 12"       | MLR-052-PS001-1200 | —                 | MLR-052-PS006-1200 |

MILLER

## MILLER

| Sales Part Number | Description     | Rod Size | Bore Size | ID | Radial Wall | Width |
|-------------------|-----------------|----------|-----------|----|-------------|-------|
| MLR-050-BU022-063 | Iron Gland      | 5/8      |           |    |             |       |
| MLR-050-BU022-100 | Iron Gland      | 1        |           |    |             |       |
| MLR-050-BU022-138 | Iron Gland      | 1-3/8    |           |    |             |       |
| MLR-050-BU022-175 | Iron Gland      | 1-3/4    |           |    |             |       |
| MLR-050-BU022-200 | Iron Gland      | 2        |           |    |             |       |
| MLR-050-BU022-250 | Iron Gland      | 2-1/2    |           |    |             |       |
| MLR-050-BU022-300 | Iron Gland      | 3        |           |    |             |       |
| MLR-050-BU024-063 | Iron Gland      | 5/8      |           |    |             |       |
| MLR-050-BU024-100 | Iron Gland      | 1        |           |    |             |       |
| MLR-050-BU024-138 | Iron Gland      | 1-3/8    |           |    |             |       |
| MLR-050-BU024-175 | Iron Gland      | 1-3/4    |           |    |             |       |
| MLR-050-BU024-200 | Iron Gland      | 2        |           |    |             |       |
| MLR-050-BU024-250 | Iron Gland      | 2-1/2    |           |    |             |       |
| MLR-050-BU024-300 | Iron Gland      | 3        |           |    |             |       |
| MLR-050-BU100-063 | Iron Gland      | 5/8      |           |    |             |       |
| MLR-050-BU100-100 | Iron Gland      | 1        |           |    |             |       |
| MLR-050-BU100-138 | Iron Gland      | 1-3/8    |           |    |             |       |
| MLR-050-BU101-063 | Iron Gland      | 5/8      |           |    |             |       |
| MLR-050-BU101-100 | Iron Gland      | 1        |           |    |             |       |
| MLR-050-BU101-138 | Iron Gland      | 1-3/8    |           |    |             |       |
| MLR-050-BU101-175 | Iron Gland      | 1-3/4    |           |    |             |       |
| MLR-050-BU101-200 | Iron Gland      | 2        |           |    |             |       |
| MLR-050-BU101-250 | Iron Gland      | 2-1/2    |           |    |             |       |
| MLR-050-BU101-300 | Iron Gland      | 3        |           |    |             |       |
| MLR-050-BU101-350 | Iron Gland      | 3-1/2    |           |    |             |       |
| MLR-050-BU101-400 | Iron Gland      | 4        |           |    |             |       |
| MLR-050-BU101-450 | Iron Gland      | 4-1/2    |           |    |             |       |
| MLR-050-BU101-500 | Iron Gland      | 5        |           |    |             |       |
| MLR-050-BU101-550 | Iron Gland      | 5-1/2    |           |    |             |       |
| MLR-050-RT005-063 | Retainer        | 5/8      |           |    |             |       |
| MLR-050-RT005-100 | Retainer        | 1        |           |    |             |       |
| MLR-050-RT005-138 | Retainer        | 1-3/8    |           |    |             |       |
| MLR-051-CG001-063 | Rod Seal Cage   | 5/8      |           |    |             |       |
| MLR-051-CG001-100 | Rod Seal Cage   | 1        |           |    |             |       |
| MLR-051-CG001-138 | Rod Seal Cage   | 1-3/8    |           |    |             |       |
| MLR-051-CG001-175 | Rod Seal Cage   | 1-3/4    |           |    |             |       |
| MLR-051-CG001-200 | Rod Seal Cage   | 2        |           |    |             |       |
| MLR-051-CG001-250 | Rod Seal Cage   | 2-1/2    |           |    |             |       |
| MLR-051-CG001-300 | Rod Seal Cage   | 3        |           |    |             |       |
| MLR-051-KR010-063 | Rod Kit - Gland | 5/8      |           |    |             |       |
| MLR-051-KR010-100 | Rod Kit - Gland | 1        |           |    |             |       |
| MLR-051-KR010-138 | Rod Kit - Gland | 1-3/8    |           |    |             |       |
| MLR-051-KR010-175 | Rod Kit - Gland | 1-3/4    |           |    |             |       |
| MLR-051-KR010-200 | Rod Kit - Gland | 2        |           |    |             |       |
| MLR-051-KR010-250 | Rod Kit - Gland | 2-1/2    |           |    |             |       |
| MLR-051-KR010-300 | Rod Kit - Gland | 3        |           |    |             |       |
| MLR-051-KR011-063 | Rod Kit - Gland | 5/8      |           |    |             |       |
| MLR-051-KR011-100 | Rod Kit - Gland | 1        |           |    |             |       |
| MLR-051-KR011-138 | Rod Kit - Gland | 1-3/8    |           |    |             |       |
| MLR-051-KR011-175 | Rod Kit - Gland | 1-3/4    |           |    |             |       |

## MILLER

| Sales Part Number | Description             | Rod Size | Bore Size | ID | Radial Wall | Width |
|-------------------|-------------------------|----------|-----------|----|-------------|-------|
| MLR-051-KR011-200 | Rod Kit - Gland         | 2        |           |    |             |       |
| MLR-051-KR011-250 | Rod Kit - Gland         | 2-1/2    |           |    |             |       |
| MLR-051-KR011-300 | Rod Kit - Gland         | 3        |           |    |             |       |
| MLR-051-KR012-063 | Rod Kit - Cage Assembly | 5/8      |           |    |             |       |
| MLR-051-KR012-100 | Rod Kit - Cage Assembly | 1        |           |    |             |       |
| MLR-051-KR012-138 | Rod Kit - Cage Assembly | 1-3/8    |           |    |             |       |
| MLR-051-KR012-175 | Rod Kit - Cage Assembly | 1-3/4    |           |    |             |       |
| MLR-051-KR012-200 | Rod Kit - Cage Assembly | 2        |           |    |             |       |
| MLR-051-KR012-250 | Rod Kit - Cage Assembly | 2-1/2    |           |    |             |       |
| MLR-051-KR012-300 | Rod Kit - Cage Assembly | 3        |           |    |             |       |
| MLR-051-KR014-063 | Rod Kit - Gland         | 5/8      |           |    |             |       |
| MLR-051-KR014-100 | Rod Kit - Gland         | 1        |           |    |             |       |
| MLR-051-KR014-138 | Rod Kit - Gland         | 1-3/8    |           |    |             |       |
| MLR-051-KR014-175 | Rod Kit - Gland         | 1-3/4    |           |    |             |       |
| MLR-051-KR014-200 | Rod Kit - Gland         | 2        |           |    |             |       |
| MLR-051-KR014-250 | Rod Kit - Gland         | 2-1/2    |           |    |             |       |
| MLR-051-KR014-300 | Rod Kit - Gland         | 3        |           |    |             |       |
| MLR-051-KR015-063 | Rod Kit - Gland         | 5/8      |           |    |             |       |
| MLR-051-KR015-100 | Rod Kit - Gland         | 1        |           |    |             |       |
| MLR-051-KR015-138 | Rod Kit - Gland         | 1-3/8    |           |    |             |       |
| MLR-051-KR015-175 | Rod Kit - Gland         | 1-3/4    |           |    |             |       |
| MLR-051-KR015-200 | Rod Kit - Gland         | 2        |           |    |             |       |
| MLR-051-KR015-250 | Rod Kit - Gland         | 2-1/2    |           |    |             |       |
| MLR-051-KR015-300 | Rod Kit - Gland         | 3        |           |    |             |       |
| MLR-051-KR024-063 | Rod Kit - Cage Assembly | 5/8      |           |    |             |       |
| MLR-051-KR024-100 | Rod Kit - Cage Assembly | 1        |           |    |             |       |
| MLR-051-KR024-138 | Rod Kit - Cage Assembly | 1-3/8    |           |    |             |       |
| MLR-051-KR024-175 | Rod Kit - Cage Assembly | 1-3/4    |           |    |             |       |
| MLR-051-KR024-200 | Rod Kit - Cage Assembly | 2        |           |    |             |       |
| MLR-051-KR024-250 | Rod Kit - Cage Assembly | 2-1/2    |           |    |             |       |
| MLR-051-KR024-300 | Rod Kit - Cage Assembly | 3        |           |    |             |       |
| MLR-051-KR064-100 | Rod Kit - Gland         | 1        |           |    |             |       |
| MLR-051-KR064-138 | Rod Kit - Gland         | 1-3/8    |           |    |             |       |
| MLR-051-KR064-063 | Rod Kit - Gland         | 5/8      |           |    |             |       |
| MLR-051-KR065-100 | Rod Kit - Gland         | 1        |           |    |             |       |
| MLR-051-KR065-138 | Rod Kit - Gland         | 1-3/8    |           |    |             |       |
| MLR-051-KR065-175 | Rod Kit - Gland         | 1-3/4    |           |    |             |       |
| MLR-051-KR065-200 | Rod Kit - Gland         | 2        |           |    |             |       |
| MLR-051-KR065-250 | Rod Kit - Gland         | 2-1/2    |           |    |             |       |
| MLR-051-KR065-300 | Rod Kit - Gland         | 3        |           |    |             |       |
| MLR-051-KR065-350 | Rod Kit - Gland         | 3-1/2    |           |    |             |       |
| MLR-051-KR065-063 | Rod Kit - Gland         | 5/8      |           |    |             |       |
| MLR-051-KR074-063 | Rod Kit - Gland         | 5/8      |           |    |             |       |
| MLR-051-KR074-100 | Rod Kit - Gland         | 1        |           |    |             |       |
| MLR-051-KR074-138 | Rod Kit - Gland         | 1-3/8    |           |    |             |       |
| MLR-051-KR075-063 | Rod Kit - Gland         | 5/8      |           |    |             |       |
| MLR-051-KR075-100 | Rod Kit - Gland         | 1        |           |    |             |       |
| MLR-051-KR075-138 | Rod Kit - Gland         | 1-3/8    |           |    |             |       |
| MLR-051-KR075-175 | Rod Kit - Gland         | 1-3/4    |           |    |             |       |
| MLR-051-KR075-200 | Rod Kit - Gland         | 2        |           |    |             |       |



## MILLER

MILLER

| Sales Part Number  | Description           | Rod Size | Bore Size | ID | Radial Wall | Width |
|--------------------|-----------------------|----------|-----------|----|-------------|-------|
| MLR-051-KR075-250  | Rod Kit - Gland       | 2-1/2    |           |    |             |       |
| MLR-051-KR075-300  | Rod Kit - Gland       | 3        |           |    |             |       |
| MLR-051-KR075-350  | Rod Kit - Gland       | 3-1/2    |           |    |             |       |
| MLR-051-KR075-400  | Rod Kit - Gland       | 4        |           |    |             |       |
| MLR-051-KR075-450  | Rod Kit - Gland       | 4-1/2    |           |    |             |       |
| MLR-051-KR075-500  | Rod Kit - Gland       | 5        |           |    |             |       |
| MLR-051-KR075-550  | Rod Kit - Gland       | 5-1/2    |           |    |             |       |
| MLR-051-KR080-063  | Rod Kit - Seal        | 5/8      |           |    |             |       |
| MLR-051-KR080-100  | Rod Kit - Seal        | 1        |           |    |             |       |
| MLR-051-KR080-138  | Rod Kit - Seal        | 1-3/8    |           |    |             |       |
| MLR-051-KR080-175  | Rod Kit - Seal        | 1-3/4    |           |    |             |       |
| MLR-051-KR080-200  | Rod Kit - Seal        | 2        |           |    |             |       |
| MLR-051-KR080-250  | Rod Kit - Seal        | 2-1/2    |           |    |             |       |
| MLR-051-KR080-300  | Rod Kit - Seal        | 3        |           |    |             |       |
| MLR-051-KR080-350  | Rod Kit - Seal        | 3-1/2    |           |    |             |       |
| MLR-051-KR080-400  | Rod Kit - Seal        | 4        |           |    |             |       |
| MLR-051-KR080-450  | Rod Kit - Seal        | 4-1/2    |           |    |             |       |
| MLR-051-KR080-500  | Rod Kit - Seal        | 5        |           |    |             |       |
| MLR-051-KR080-550  | Rod Kit - Seal        | 5-1/2    |           |    |             |       |
| MLR-051-PG001-063  | Bronze Pressure Ring  | 5/8      |           |    |             |       |
| MLR-051-PG001-100  | Bronze Pressure Ring  | 1        |           |    |             |       |
| MLR-051-PG001-138  | Bronze Pressure Ring  | 1-3/8    |           |    |             |       |
| MLR-051-PG001-175  | Bronze Pressure Ring  | 1-3/4    |           |    |             |       |
| MLR-051-PG001-200  | Bronze Pressure Ring  | 2        |           |    |             |       |
| MLR-051-PG001-250  | Bronze Pressure Ring  | 2-1/2    |           |    |             |       |
| MLR-051-PG001-300  | Bronze Pressure Ring  | 3        |           |    |             |       |
| MLR-051-RS007-063  | Hat Packing - PTFE    | 5/8      |           |    |             |       |
| MLR-051-RS007-100  | Hat Packing - PTFE    | 1        |           |    |             |       |
| MLR-051-RS007-1000 | Hat Packing - PTFE    | 10       |           |    |             |       |
| MLR-051-RS007-138  | Hat Packing - PTFE    | 1-3/8    |           |    |             |       |
| MLR-051-RS007-175  | Hat Packing - PTFE    | 1-3/4    |           |    |             |       |
| MLR-051-RS007-200  | Hat Packing - PTFE    | 2        |           |    |             |       |
| MLR-051-RS007-250  | Hat Packing - PTFE    | 2-1/2    |           |    |             |       |
| MLR-051-RS007-300  | Hat Packing - PTFE    | 3        |           |    |             |       |
| MLR-051-RS007-350  | Hat Packing - PTFE    | 3-1/2    |           |    |             |       |
| MLR-051-RS007-400  | Hat Packing - PTFE    | 4        |           |    |             |       |
| MLR-051-RS007-450  | Hat Packing - PTFE    | 4-1/2    |           |    |             |       |
| MLR-051-RS007-500  | Hat Packing - PTFE    | 5        |           |    |             |       |
| MLR-051-RS007-550  | Hat Packing - PTFE    | 5-1/2    |           |    |             |       |
| MLR-051-RS007-700  | Hat Packing - PTFE    | 7        |           |    |             |       |
| MLR-051-RS007-800  | Hat Packing - PTFE    | 8        |           |    |             |       |
| MLR-051-RS007-900  | Hat Packing - PTFE    | 9        |           |    |             |       |
| MLR-051-RS014-063  | Hat Packing - Nitrile | 5/8      |           |    |             |       |
| MLR-051-RS014-100  | Hat Packing - Nitrile | 1        |           |    |             |       |
| MLR-051-RS014-138  | Hat Packing - Nitrile | 1-3/8    |           |    |             |       |
| MLR-051-RS014-175  | Hat Packing - Nitrile | 1-3/4    |           |    |             |       |
| MLR-051-RS014-200  | Hat Packing - Nitrile | 2        |           |    |             |       |
| MLR-051-RS014-250  | Hat Packing - Nitrile | 2-1/2    |           |    |             |       |
| MLR-051-RS014-300  | Hat Packing - Nitrile | 3        |           |    |             |       |
| MLR-051-RS014-350  | Hat Packing - Nitrile | 3-1/2    |           |    |             |       |

## MILLER

| Sales Part Number  | Description           | Rod Size | Bore Size | ID    | Radial Wall | Width |
|--------------------|-----------------------|----------|-----------|-------|-------------|-------|
| MLR-051-RS014-400  | Hat Packing - Nitrile | 4        |           |       |             |       |
| MLR-051-RS014-450  | Hat Packing - Nitrile | 4-1/2    |           |       |             |       |
| MLR-051-RS014-500  | Hat Packing - Nitrile | 5        |           |       |             |       |
| MLR-051-RS014-550  | Hat Packing - Nitrile | 5-1/2    |           |       |             |       |
| MLR-051-WP001-063  | U' Style Wiper - PTFE | 5/8      |           |       |             |       |
| MLR-051-WP001-100  | U' Style Wiper - PTFE | 1        |           |       |             |       |
| MLR-051-WP001-1000 | U' Style Wiper - PTFE | 10       |           |       |             |       |
| MLR-051-WP001-138  | U' Style Wiper - PTFE | 1-3/8    |           |       |             |       |
| MLR-051-WP001-175  | U' Style Wiper - PTFE | 1-3/4    |           |       |             |       |
| MLR-051-WP001-200  | U' Style Wiper - PTFE | 2        |           |       |             |       |
| MLR-051-WP001-250  | U' Style Wiper - PTFE | 2-1/2    |           |       |             |       |
| MLR-051-WP001-300  | U' Style Wiper - PTFE | 3        |           |       |             |       |
| MLR-051-WP001-350  | U' Style Wiper - PTFE | 3-1/2    |           |       |             |       |
| MLR-051-WP001-400  | U' Style Wiper - PTFE | 4        |           |       |             |       |
| MLR-051-WP001-450  | U' Style Wiper - PTFE | 4-1/2    |           |       |             |       |
| MLR-051-WP001-500  | U' Style Wiper - PTFE | 5        |           |       |             |       |
| MLR-051-WP001-550  | U' Style Wiper - PTFE | 5-1/2    |           |       |             |       |
| MLR-051-WP001-700  | U' Style Wiper - PTFE | 7        |           |       |             |       |
| MLR-051-WP001-800  | U' Style Wiper - PTFE | 8        |           |       |             |       |
| MLR-051-WP001-900  | U' Style Wiper - PTFE | 9        |           |       |             |       |
| MLR-051-WS003-200  | Wave Spring           | 2        |           |       |             |       |
| MLR-051-WS003-250  | Wave Spring           | 2-1/2    |           |       |             |       |
| MLR-051-WS003-300  | Wave Spring           | 3        |           |       |             |       |
| MLR-051-WS004-063  | Wave Spring           | 5/8      |           |       |             |       |
| MLR-051-WS004-100  | Wave Spring           | 1        |           |       |             |       |
| MLR-051-WS004-138  | Wave Spring           | 1-3/8    |           |       |             |       |
| MLR-051-WS004-175  | Wave Spring           | 1-3/4    |           |       |             |       |
| MLR-052-FS001-100  | Follower Seal         |          |           | 1     | 0.142       | 0.142 |
| MLR-052-FS001-125  | Follower Seal         |          |           | 1-1/4 | 0.142       | 0.142 |
| MLR-052-FS001-150  | Follower Seal         |          |           | 1-1/2 | 0.142       | 0.142 |
| MLR-052-FS001-188  | Follower Seal         |          |           | 1-7/8 | 0.142       | 0.142 |
| MLR-052-FS001-250  | Follower Seal         |          |           | 2-1/2 | 0.142       | 0.142 |
| MLR-052-FS001-44   | Follower Seal         |          |           | 7/16  | 0.070       | 0.070 |
| MLR-052-FS001-75   | Follower Seal         |          |           | 3/4   | 0.070       | 0.070 |
| MLR-052-PS001-1000 | Piston Cup - Nitrile  |          | 10        |       |             |       |
| MLR-052-PS001-1200 | Piston Cup - Nitrile  |          | 12        |       |             |       |
| MLR-052-PS001-150  | Piston Cup - Nitrile  |          | 1-1/2     |       |             |       |
| MLR-052-PS001-200  | Piston Cup - Nitrile  |          | 2         |       |             |       |
| MLR-052-PS001-250  | Piston Cup - Nitrile  |          | 2-1/2     |       |             |       |
| MLR-052-PS001-325  | Piston Cup - Nitrile  |          | 3-1/4     |       |             |       |
| MLR-052-PS001-400  | Piston Cup - Nitrile  |          | 4         |       |             |       |
| MLR-052-PS001-500  | Piston Cup - Nitrile  |          | 5         |       |             |       |
| MLR-052-PS001-600  | Piston Cup - Nitrile  |          | 6         |       |             |       |
| MLR-052-PS001-800  | Piston Cup - Nitrile  |          | 8         |       |             |       |
| MLR-052-PS003-150  | Piston Cup - Leather  |          | 1-1/2     |       |             |       |
| MLR-052-PS003-200  | Piston Cup - Leather  |          | 2         |       |             |       |
| MLR-052-PS003-250  | Piston Cup - Leather  |          | 2-1/2     |       |             |       |
| MLR-052-PS003-325  | Piston Cup - Leather  |          | 3-1/4     |       |             |       |
| MLR-052-PS003-400  | Piston Cup - Leather  |          | 4         |       |             |       |
| MLR-052-PS003-500  | Piston Cup - Leather  |          | 5         |       |             |       |

## MILLER

| Sales Part Number     | Description             | Rod Size | Bore Size | ID | Radial Wall | Width |
|-----------------------|-------------------------|----------|-----------|----|-------------|-------|
| MLR-052-PS003-600     | Piston Cup - Leather    |          | 6         |    |             |       |
| MLR-052-PS006-1000    | Piston Cup - PTFE       |          | 10        |    |             |       |
| MLR-052-PS006-1200    | Piston Cup - PTFE       |          | 12        |    |             |       |
| MLR-052-PS006-150     | Piston Cup - PTFE       |          | 1-1/2     |    |             |       |
| MLR-052-PS006-200     | Piston Cup - PTFE       |          | 2         |    |             |       |
| MLR-052-PS006-250     | Piston Cup - PTFE       |          | 2-1/2     |    |             |       |
| MLR-052-PS006-325     | Piston Cup - PTFE       |          | 3-1/4     |    |             |       |
| MLR-052-PS006-400     | Piston Cup - PTFE       |          | 4         |    |             |       |
| MLR-052-PS006-500     | Piston Cup - PTFE       |          | 5         |    |             |       |
| MLR-052-PS006-600     | Piston Cup - PTFE       |          | 6         |    |             |       |
| MLR-052-PS006-700     | Piston Cup - PTFE       |          | 7         |    |             |       |
| MLR-052-PS006-800     | Piston Cup - PTFE       |          | 8         |    |             |       |
| MLR-052-PS016-1200    | Piston U-seal - Nitrile |          | 12        |    |             |       |
| MLR-052-PS016-800     | Piston U-seal - Nitrile |          | 8         |    |             |       |
| MLR-052-PS017-1000    | Piston U-seal - PTFE    |          | 10        |    |             |       |
| MLR-052-PS017-1200    | Piston U-seal - PTFE    |          | 12        |    |             |       |
| MLR-052-PS017-1400    | Piston U-seal - PTFE    |          | 14        |    |             |       |
| MLR-052-PS017-150     | Piston U-seal - PTFE    |          | 1-1/2     |    |             |       |
| MLR-052-PS017-1600    | Piston U-seal - PTFE    |          | 16        |    |             |       |
| MLR-052-PS017-1800    | Piston U-seal - PTFE    |          | 18        |    |             |       |
| MLR-052-PS017-200     | Piston U-seal - PTFE    |          | 2         |    |             |       |
| MLR-052-PS017-250     | Piston U-seal - PTFE    |          | 2-1/2     |    |             |       |
| MLR-052-PS017-325     | Piston U-seal - PTFE    |          | 3-1/4     |    |             |       |
| MLR-052-PS017-400     | Piston U-seal - PTFE    |          | 4         |    |             |       |
| MLR-052-PS017-500     | Piston U-seal - PTFE    |          | 5         |    |             |       |
| MLR-052-PS017-600     | Piston U-seal - PTFE    |          | 6         |    |             |       |
| MLR-052-PS017-700     | Piston U-seal - PTFE    |          | 7         |    |             |       |
| MLR-052-PS017-800     | Piston U-seal - PTFE    |          | 8         |    |             |       |
| MLR-052-PS025-1000    | Piston U-seal - Nitrile |          | 10        |    |             |       |
| MLR-052-PS025-1400    | Piston U-seal - Nitrile |          | 14        |    |             |       |
| MLR-052-PS025-150     | Piston U-seal - Nitrile |          | 1-1/2     |    |             |       |
| MLR-052-PS025-1600    | Piston U-seal - Nitrile |          | 16        |    |             |       |
| MLR-052-PS025-200     | Piston U-seal - Nitrile |          | 2         |    |             |       |
| MLR-052-PS025-250     | Piston U-seal - Nitrile |          | 2-1/2     |    |             |       |
| MLR-052-PS025-325     | Piston U-seal - Nitrile |          | 3-1/4     |    |             |       |
| MLR-052-PS025-400     | Piston U-seal - Nitrile |          | 4         |    |             |       |
| MLR-052-PS025-500     | Piston U-seal - Nitrile |          | 5         |    |             |       |
| MLR-052-PS025-600     | Piston U-seal - Nitrile |          | 6         |    |             |       |
| MLR-052-PS025-700     | Piston U-seal - Nitrile |          | 7         |    |             |       |
| MLR-052-WR005-1000-38 | Wear Ring - PTFE        |          | 10        |    |             |       |
| MLR-052-WR005-1200-38 | Wear Ring - PTFE        |          | 12        |    |             |       |
| MLR-052-WR005-150-25  | Wear Ring - PTFE        |          | 1-1/2     |    |             |       |
| MLR-052-WR005-1600-50 | Wear Ring - PTFE        |          | 16        |    |             |       |
| MLR-052-WR005-1800-50 | Wear Ring - PTFE        |          | 18        |    |             |       |
| MLR-052-WR005-2000-50 | Wear Ring - PTFE        |          | 20        |    |             |       |
| MLR-052-WR005-200-25  | Wear Ring - PTFE        |          | 2         |    |             |       |
| MLR-052-WR005-250-25  | Wear Ring - PTFE        |          | 2-1/2     |    |             |       |
| MLR-052-WR005-325-25  | Wear Ring - PTFE        |          | 3-1/4     |    |             |       |
| MLR-052-WR005-400-25  | Wear Ring - PTFE        |          | 4         |    |             |       |
| MLR-052-WR005-500-25  | Wear Ring - PTFE        |          | 5         |    |             |       |

## MILLER

| Sales Part Number      | Description        | Rod Size | Bore Size | ID | Radial Wall | Width |
|------------------------|--------------------|----------|-----------|----|-------------|-------|
| MLR-052-WR005-600-25   | Wear Ring - PTFE   |          | 6         |    |             |       |
| MLR-052-WR005-700-38   | Wear Ring - PTFE   |          | 7         |    |             |       |
| MLR-052-WR005-800-38   | Wear Ring - PTFE   |          | 8         |    |             |       |
| MLR-052-WR008-1000-125 | Wear Ring - Bronze |          | 10        |    |             |       |
| MLR-052-WR008-1200-125 | Wear Ring - Bronze |          | 12        |    |             |       |
| MLR-052-WR008-700-75   | Wear Ring - Bronze |          | 7         |    |             |       |
| MLR-052-WR008-800-125  | Wear Ring - Bronze |          | 8         |    |             |       |
| MLR-052-WR009-150-25   | Wear Ring - Acetal |          | 1-1/2     |    |             |       |
| MLR-052-WR009-200-25   | Wear Ring - Acetal |          | 2         |    |             |       |
| MLR-052-WR009-200-31   | Wear Ring - Acetal |          | 2         |    |             |       |
| MLR-052-WR009-250-25   | Wear Ring - Acetal |          | 2-1/2     |    |             |       |
| MLR-052-WR009-250-38   | Wear Ring - Acetal |          | 2-1/2     |    |             |       |
| MLR-052-WR009-325-25   | Wear Ring - Acetal |          | 3-1/4     |    |             |       |
| MLR-052-WR009-325-50   | Wear Ring - Acetal |          | 3-1/4     |    |             |       |
| MLR-052-WR009-400-25   | Wear Ring - Acetal |          | 4         |    |             |       |
| MLR-052-WR009-400-63   | Wear Ring - Acetal |          | 4         |    |             |       |
| MLR-052-WR009-500-75   | Wear Ring - Acetal |          | 5         |    |             |       |
| MLR-052-WR009-600-75   | Wear Ring - Acetal |          | 6         |    |             |       |
| MLR-090-ES006-1000     | Tube End Seal      |          | 10        |    |             |       |
| MLR-090-ES006-1200     | Tube End Seal      |          | 12        |    |             |       |
| MLR-090-ES006-1400     | Tube End Seal      |          | 14        |    |             |       |
| MLR-090-ES006-150      | Tube End Seal      |          | 1-1/2     |    |             |       |
| MLR-090-ES006-200      | Tube End Seal      |          | 2         |    |             |       |
| MLR-090-ES006-250      | Tube End Seal      |          | 2-1/2     |    |             |       |
| MLR-090-ES006-325      | Tube End Seal      |          | 3-1/4     |    |             |       |
| MLR-090-ES006-400      | Tube End Seal      |          | 4         |    |             |       |
| MLR-090-ES006-500      | Tube End Seal      |          | 5         |    |             |       |
| MLR-090-ES006-600      | Tube End Seal      |          | 6         |    |             |       |
| MLR-090-ES006-700      | Tube End Seal      |          | 7         |    |             |       |
| MLR-090-ES006-800      | Tube End Seal      |          | 8         |    |             |       |
| MLR-090-ES009-1000     | Tube End Seal      |          | 10        |    |             |       |
| MLR-090-ES009-1200     | Tube End Seal      |          | 12        |    |             |       |
| MLR-090-ES009-1400     | Tube End Seal      |          | 14        |    |             |       |
| MLR-090-ES009-150      | Tube End Seal      |          | 1-1/2     |    |             |       |
| MLR-090-ES009-200      | Tube End Seal      |          | 2         |    |             |       |
| MLR-090-ES009-250      | Tube End Seal      |          | 2-1/2     |    |             |       |
| MLR-090-ES009-325      | Tube End Seal      |          | 3-1/4     |    |             |       |
| MLR-090-ES009-400      | Tube End Seal      |          | 4         |    |             |       |
| MLR-090-ES009-500      | Tube End Seal      |          | 5         |    |             |       |
| MLR-090-ES009-600      | Tube End Seal      |          | 6         |    |             |       |
| MLR-090-ES009-700      | Tube End Seal      |          | 7         |    |             |       |
| MLR-090-ES009-800      | Tube End Seal      |          | 8         |    |             |       |
| MLR-090-KB001-1000     | Piston Kit         |          | 10        |    |             |       |
| MLR-090-KB001-1200     | Piston Kit         |          | 12        |    |             |       |
| MLR-090-KB001-150      | Piston Kit         |          | 1-1/2     |    |             |       |
| MLR-090-KB001-200      | Piston Kit         |          | 2         |    |             |       |
| MLR-090-KB001-250      | Piston Kit         |          | 2-1/2     |    |             |       |
| MLR-090-KB001-325      | Piston Kit         |          | 3-1/4     |    |             |       |
| MLR-090-KB001-400      | Piston Kit         |          | 4         |    |             |       |
| MLR-090-KB001-500      | Piston Kit         |          | 5         |    |             |       |

## MILLER

| Sales Part Number  | Description   | Rod Size | Bore Size | ID | Radial Wall | Width |
|--------------------|---------------|----------|-----------|----|-------------|-------|
| MLR-090-KB001-600  | Piston Kit    |          | 6         |    |             |       |
| MLR-090-KB001-700  | Piston Kit    |          | 7         |    |             |       |
| MLR-090-KB001-800  | Piston Kit    |          | 8         |    |             |       |
| MLR-091-KB001-1000 | Piston Kit    |          | 10        |    |             |       |
| MLR-091-KB001-1200 | Piston Kit    |          | 12        |    |             |       |
| MLR-091-KB001-150  | Piston Kit    |          | 1-1/2     |    |             |       |
| MLR-091-KB001-200  | Piston Kit    |          | 2         |    |             |       |
| MLR-091-KB001-250  | Piston Kit    |          | 2-1/2     |    |             |       |
| MLR-091-KB001-325  | Piston Kit    |          | 3-1/4     |    |             |       |
| MLR-091-KB001-400  | Piston Kit    |          | 4         |    |             |       |
| MLR-091-KB001-500  | Piston Kit    |          | 5         |    |             |       |
| MLR-091-KB001-600  | Piston Kit    |          | 6         |    |             |       |
| MLR-091-KB001-700  | Piston Kit    |          | 7         |    |             |       |
| MLR-091-KB001-800  | Piston Kit    |          | 8         |    |             |       |
| MLR-150-KB001-325  | Piston Kit    |          | 3-1/4     |    |             |       |
| MLR-150-KB001-500  | Piston Kit    |          | 5         |    |             |       |
| MLR-170-ES006-1000 | Tube End Seal |          | 10        |    |             |       |
| MLR-170-ES006-1200 | Tube End Seal |          | 12        |    |             |       |
| MLR-170-ES006-1400 | Tube End Seal |          | 14        |    |             |       |
| MLR-170-ES006-150  | Tube End Seal |          | 1-1/2     |    |             |       |
| MLR-170-ES006-1800 | Tube End Seal |          | 18        |    |             |       |
| MLR-170-ES006-200  | Tube End Seal |          | 2         |    |             |       |
| MLR-170-ES006-250  | Tube End Seal |          | 2-1/2     |    |             |       |
| MLR-170-ES006-325  | Tube End Seal |          | 3-1/4     |    |             |       |
| MLR-170-ES006-400  | Tube End Seal |          | 4         |    |             |       |
| MLR-170-ES006-500  | Tube End Seal |          | 5         |    |             |       |
| MLR-170-ES006-600  | Tube End Seal |          | 6         |    |             |       |
| MLR-170-ES006-700  | Tube End Seal |          | 7         |    |             |       |
| MLR-170-ES006-800  | Tube End Seal |          | 8         |    |             |       |
| MLR-170-ES010-1000 | Tube End Seal |          | 10        |    |             |       |
| MLR-170-ES010-1200 | Tube End Seal |          | 12        |    |             |       |
| MLR-170-ES010-150  | Tube End Seal |          | 1-1/2     |    |             |       |
| MLR-170-ES010-200  | Tube End Seal |          | 2         |    |             |       |
| MLR-170-ES010-250  | Tube End Seal |          | 2-1/2     |    |             |       |
| MLR-170-ES010-325  | Tube End Seal |          | 3-1/4     |    |             |       |
| MLR-170-ES010-400  | Tube End Seal |          | 4         |    |             |       |
| MLR-170-ES010-500  | Tube End Seal |          | 5         |    |             |       |
| MLR-170-ES010-600  | Tube End Seal |          | 6         |    |             |       |
| MLR-170-ES010-700  | Tube End Seal |          | 7         |    |             |       |
| MLR-170-ES010-800  | Tube End Seal |          | 8         |    |             |       |
| MLR-171-KB001-1000 | Piston Kit    |          | 10        |    |             |       |
| MLR-171-KB001-1200 | Piston Kit    |          | 12        |    |             |       |
| MLR-171-KB001-150  | Piston Kit    |          | 1-1/2     |    |             |       |
| MLR-171-KB001-200  | Piston Kit    |          | 2         |    |             |       |
| MLR-171-KB001-250  | Piston Kit    |          | 2-1/2     |    |             |       |
| MLR-171-KB001-325  | Piston Kit    |          | 3-1/4     |    |             |       |
| MLR-171-KB001-400  | Piston Kit    |          | 4         |    |             |       |
| MLR-171-KB001-500  | Piston Kit    |          | 5         |    |             |       |
| MLR-171-KB001-600  | Piston Kit    |          | 6         |    |             |       |
| MLR-171-KB001-700  | Piston Kit    |          | 7         |    |             |       |

## MILLER

| Sales Part Number | Description                                  | Rod Size | Bore Size | ID | Radial Wall | Width |
|-------------------|----------------------------------------------|----------|-----------|----|-------------|-------|
| MLR-171-KB001-800 | Piston Kit                                   |          | 8         |    |             |       |
| MLR-181-KB001-150 | Piston Kit                                   |          | 1-1/2     |    |             |       |
| MLR-181-KB001-200 | Piston Kit                                   |          | 2         |    |             |       |
| MLR-181-KB001-250 | Piston Kit                                   |          | 2-1/2     |    |             |       |
| MLR-181-KB001-325 | Piston Kit                                   |          | 3-1/4     |    |             |       |
| MLR-181-KB001-400 | Piston Kit                                   |          | 4         |    |             |       |
| MLR-181-KB001-500 | Piston Kit                                   |          | 5         |    |             |       |
| MLR-181-KB001-600 | Piston Kit                                   |          | 6         |    |             |       |
| MLR-181-KB001-700 | Piston Kit                                   |          | 7         |    |             |       |
| MLR-181-KB001-800 | Piston Kit                                   |          | 8         |    |             |       |
| MLR-RG065-063     | Iron Gland                                   |          | 5/8       |    |             |       |
| MLR-RG065-100     | Iron Gland                                   |          | 1         |    |             |       |
| MLR-RG065-138     | Iron Gland                                   |          | 1-3/8     |    |             |       |
| MLR-RG065-175     | Iron Gland                                   |          | 1-3/4     |    |             |       |
| MLR-RG065-200     | Iron Gland                                   |          | 2         |    |             |       |
| MLR-RG065-250     | Iron Gland                                   |          | 2-1/2     |    |             |       |
| MLR-RG065-300     | Iron Gland                                   |          | 3         |    |             |       |
| MLR-RG065-350     | Iron Gland                                   |          | 3-1/2     |    |             |       |
| MLR-008-SH001-30  | 0.03cs x 0.07w PTFE strip (30' Spool)        |          |           |    |             |       |
| MLR-SH1-STRIP     | 0.03cs x 0.07w PTFE strip (sold by the foot) |          |           |    |             |       |

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