

General Description: Parker 60 Series spring return (AC/AO) or double acting (AD) rack and pinion actuators are compact, simply designed devices that are quality engineered to provide high torque outputs and a high cycle, trouble-free life.

A compact, dual opposed rack and pinion design and guide band suspension combine to produce a symmetrically balanced, center mount actuator. In addition, the actuator has a short powerful stroke, rapid response, and fully concentric operating load capability which ensures optimum performance.

Features:

- Three point suspension system uses carbon filled PTFE guide bands for piston alignment and rack support
- Dual opposed piston design uses air pressure on two pistons to deliver a balanced force to the pinion gear
- Patented balanced piston design results in even distribution of bearing loads and eliminates piston tilting
- Multiple spring concept permits actuator use at 40 to 120 psig air supply requirements
- Suitable for use with dry or lubricated air, non-corrosive gas, or light hydraulic oil
- Aluminum alloy body construction with two component polyurethane coating
- Manual override

PNEUMATIC ACTUATORS**SPECIFICATIONS****Operating Pressure**

90° Models: 40 to 120 psig maximum

AC – Normally Closed Spring Return

AD – Double Acting

AO – Normally Open Spring Return

180° Models: 80 psig maximum

ACX – Spring Return

ADX – Double Acting

Temperature Range

-4°F to 175°F

Optional high and low temperature

OPERATION

Actuators are manufactured with an integral air manifold and internal porting. The air manifold is designed for direct mounting of solenoid valves. This eliminates the need for external tubing and simplifies installation. For applications not requiring a solenoid valve, the air manifold inlet ports are marked "A" and "B". Air inlet port "A" will rotate the actuator counter-clockwise. Spring return actuators fail clockwise.

PNEUMATIC ACTUATORS

90° MODELS AD, AC AND AO

Performance Characteristics

| Series | Bore (in.) | Stroke (in.) | Weight | | Operating Time sec | Air Consumption in ³ | |
|--------|------------|--------------|--------|----------|--------------------|---------------------------------|-----------|
| | | | AD lb | AC/AO lb | | Port "A" | Port "B"+ |
| 61 | 1.8 | 0.5 | 1.3 | 1.5 | 0.4 | 3.1 | 3.7 |
| 62 | 2.2 | 0.6 | 2.9 | 3.7 | 0.5 | 6.1 | 6.7 |
| 63 | 2.8 | 0.7 | 4.0 | 5.3 | 0.7 | 9.8 | 13.4 |
| 65 | 3.1 | 0.9 | 5.3 | 7.9 | 1.1 | 20.1 | 22.0 |
| 66 | 3.6 | 1.0 | 6.8 | 10.1 | 1.2 | 21.4 | 29.9 |

+Double acting only

AD Torques

| Series | 40 psig in-lb | 60 psig in-lb | 80 psig in-lb | 100 psig in-lb |
|--------|---------------|---------------|---------------|----------------|
| 61 | 59 | 89 | 119 | 149 |
| 62 | 109 | 165 | 220 | 276 |
| 63 | 205 | 309 | 413 | 518 |
| 65 | 312 | 471 | 630 | 789 |
| 66 | 461 | 696 | 930 | 1165 |

AC and AO Torques

| Series | Spring Set | Air Torque | | | | Spring Torque in-lb |
|--------|------------|---------------|---------------|---------------|----------------|---------------------|
| | | 40 psig in-lb | 60 psig in-lb | 80 psig in-lb | 100 psig in-lb | |
| 61 | 2 | - | 23 | 55 | 87 | 41 |
| 62 | 2 | 44 | 103 | 162 | 220 | 39 |
| 62 | 3 | 8 | 66 | 126 | 185 | 58 |
| 62 | 4 | - | 31 | 90 | 149 | 78 |
| 62 | 5 | - | - | 54 | 113 | 98 |
| 62 | 6 | - | - | 18 | 77 | 117 |
| 63 | 2 | 82 | 193 | 304 | 413 | 74 |
| 63 | 3 | 15 | 126 | 236 | 346 | 110 |
| 63 | 4 | - | 58 | 169 | 279 | 146 |
| 63 | 5 | - | - | 101 | 212 | 183 |
| 63 | 6 | - | - | 34 | 144 | 220 |
| 65 | 2 | 117 | 285 | 453 | 622 | 117 |
| 65 | 3 | 10 | 178 | 347 | 515 | 175 |

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PNEUMATIC ACTUATORS

90° MODELS AC AND AO

AC and AO Torques

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| Series | Spring Set | Air Torque | | | | Spring Torque in-lb |
|--------|------------|---------------|---------------|---------------|----------------|---------------------|
| | | 40 psig in-lb | 60 psig in-lb | 80 psig in-lb | 100 psig in-lb | |
| 65 | 4 | - | 72 | 240 | 408 | 234 |
| 65 | 5 | - | - | 133 | 301 | 292 |
| 65 | 6 | - | - | 26 | 195 | 351 |
| 66 | 2 | 192 | 441 | 690 | 939 | 161 |
| 66 | 3 | 43 | 293 | 542 | 790 | 242 |
| 66 | 4 | - | 143 | 392 | 641 | 323 |
| 66 | 5 | - | - | 244 | 492 | 403 |
| 66 | 6 | - | - | 95 | 344 | 484 |

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PNEUMATIC ACTUATORS

180° MODELS ACX AND ADX

Performance Characteristics

| Series | Bore (in.) | Stroke (in.) | Weight | | Operating Time sec | Air Consumption in ³ | |
|--------|------------|--------------|--------|-------|--------------------|---------------------------------|-----------|
| | | | AD lb | AC lb | | Port "A" | Port "B"+ |
| 61 | 1.8 | 1.0 | 1.9 | 2.4 | 0.8 | 4.5 | 5.7 |

+Double acting only

ADX Torques

| Series | 40 psig in-lb | 60 psig in-lb | 80 psig in-lb |
|--------|---------------|---------------|---------------|
| 61 | 59 | 89 | 119 |

ACX Torques

| Series | Spring Set | Air Torque | | | Spring Torque in-lb |
|--------|------------|---------------|---------------|---------------|---------------------|
| | | 40 psig in-lb | 60 psig in-lb | 80 psig in-lb | |
| 61 | 2 | - | 25 | 57 | 39 |

PNEUMATIC ACTUATORS

Recommended Actuators for B, MB, and HB Series Ball Valves*

| Valve Series | Double Acting AD | Spring Return AO | Spring Return AC |
|--------------|------------------|------------------|------------------|
| B2LJ | 61AD | 61AO-2 | 61AC-2 |
| B2LJ2 | 61AD | 61AO-2 | 61AC-2 |
| B2XJ | 61ADX | 61ACX-2 | 61ACX-2 |
| B2XJ2 | 61ADX | 61ACX-2 | 61ACX-2 |
| B6LJ | 61AD | 61AO-2 | 61AC-2 |
| B6LJ2 | 61AD | 61AO-2 | 61AC-2 |
| B6LS2 | 61AD | 61AO-2 | 61AC-2 |
| B6LPKR | 61AD | 61AO-2 | 61AC-2 |
| B6LSPKR | 61AD | 61AO-2 | 61AC-2 |
| B6XJ | 61ADX | 61ACX-2 | 61ACX-2 |
| B6XJ2 | 61ADX | 61ACX-2 | 61ACX-2 |
| B6XS2 | 61ADX | 61ACX-2 | 61ACX-2 |
| B6XPKR | 61ADX | 61ACX-2 | 61ACX-2 |
| B6XSPKR | 61ADX | 61ACX-2 | 61ACX-2 |
| B8LJ | 61AD | 61AO-2 | 61AC-2 |
| B8LJ2 | 61AD | 62AO-3 | 62AC-3 |
| B8LS2 | 61AD | 62AO-3 | 62AC-3 |
| B8LPKR | 61AD | 62AO-3 | 62AC-3 |
| B8XJ | 61ADX | 61ACX-2 | 61ACX-2 |
| B8XJ2 | 61ADX | ACX64-3 | ACX64-3 |
| B8XS2 | 61ADX | ACX64-3 | ACX64-3 |
| B8XPKR | 61ADX | ACX64-3 | ACX64-3 |
| HB4LPKR | 61AD | 62AO-3 | 62AC-3 |
| HB4LK | 61AD | 61AO-2 | 61AC-2 |
| HB4XPKR | 61ADX | ACX62-3 | ACX62-3 |
| HB4XK | 61ADX | 61ACX-2 | 61ACX-2 |
| MB2A | 61AD | 61AO-2 | 61AC-2 |
| MB2L | 61AD | 61AO-2 | 61AC-2 |
| MB2X | 61ADX | 61ACX-2 | 61ACX-2 |
| MB4A | 61AD | 61AO-2 | 61AC-2 |
| MB4L | 61AD | 61AO-2 | 61AC-2 |
| MB4X | 61ADX | 61ACX-2 | 61ACX-2 |
| MB6A | 61AD | 61AO-2 | 61AC-2 |
| MB6L | 61AD | 61AO-2 | 61AC-2 |
| MB6X | 61ADX | 61ACX-2 | 61ACX-2 |
| SWB4 | 61AD | 61AO-2 | 61AC-2 |
| SWB8 | 61AD | 62AO-3 | 62AC-3 |
| SWB12 | 61AD | 62AO-3 | 62AC-3 |
| SWB16 | 62AD | 62AO-3 | 62AC-3 |

*With 60 psig actuation pressure