The Series 11 miniature pneumatic solenoid valve is a robust and proven product with a reputation for reliable and consistent performance. The Series 11 miniature solenoid valve is the preferred choice of major OEM’s in the medical and analytical market. With valve bodies made from brass or stainless steel, the Series 11 miniature solenoid valve is an ideal solution for general purpose applications and those applications requiring low out-gassing and a bubble-tight seal.

**Applications**
- Oxygen Conservers
- Oxygen Concentrators
- Compression Therapy
- Gas Chromatography
- Insufflators
- Medical & Analytical Gas Control

**Features**
- Proven performance tested to 260 million life cycles
- Wide range of available electrical connections to simplify valve integration and control
- Manifold mount or barbed tube pneumatic configurations available for added system design flexibility
- Available Analytical and Oxygen Service Clean to minimize contamination
- RoHS compliant

**Product Specifications**

**Mechanical**

<table>
<thead>
<tr>
<th>Valve Type:</th>
<th>Solenoid-actuated poppet style</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2/3 Port, Normally Closed (NC)</td>
</tr>
<tr>
<td></td>
<td>2/3 Port, Normally Open (NO)</td>
</tr>
<tr>
<td></td>
<td>3 Port, Distributor</td>
</tr>
<tr>
<td></td>
<td>2 Port, Normally Closed (NC) - Universal</td>
</tr>
</tbody>
</table>

| Media: | Air, argon, helium, hydrogen, methane, nitrogen, oxygen, & other non-reacting gasses |

<table>
<thead>
<tr>
<th>Operating Environment:</th>
<th>32 to 158°F (0 to 70°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temperature:</td>
<td>-40 to 158°F (-40 to 70°C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions:</th>
<th>Length: 1.73 in (43.9 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Width: 0.63 in (15.8 mm)</td>
</tr>
<tr>
<td></td>
<td>Height: 0.67 in (17.0 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight:</th>
<th>2.1 oz (60 g)</th>
</tr>
</thead>
</table>

| Internal Volume: | 0.026 in³ (0.426 cm³) |

| Filtration: | 40 micron (recommended) |

**Electrical**

<table>
<thead>
<tr>
<th>Power Options:</th>
<th>0.5, 1.0, or 2.0 Watts</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Voltage Options:</th>
<th>5, 12 or 24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Further power reduction may be achieved through the use of spike and hold or PWM electrical control.</td>
</tr>
</tbody>
</table>

| Electrical Connections: | Wire Leads, PC Pins, Solder Tabs, Quick Disconnect Spade |

**Performance Characteristics**

<table>
<thead>
<tr>
<th>Leak Rate:</th>
<th>&lt;0.016 sccm of air</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0 sccm of air (Model 20 only)</td>
</tr>
</tbody>
</table>

| Response: | <30 ms cycling |

<table>
<thead>
<tr>
<th>Pressure:</th>
<th>0 to 100 psig (6.9 bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum:</td>
<td>0-27 in Hg (686 mm Hg)</td>
</tr>
</tbody>
</table>

| Orifice Sizes: | 0.030" (0.76 mm) |
|                | 0.050" (1.27 mm) |
|                | 0.102" (2.59 mm) |

**Wetted Materials**

| Body: | 36000 HO2 Brass; |
|       | 303 Series Stainless Steel |

| Stem Base: | 36000 HO2 Brass; |
|            | 303 Series Stainless Steel |

| Poppet Options: | FKM |

| All Others: | 430 FR Series Stainless Steel |
|            | 302 Series Stainless Steel |

| Filtration: | 40 micron (recommended) |

| Oxygen Clean: | Call For Details |
**Series 11** Miniature Pneumatic Solenoid Valve

**Typical Flow Curve**

**Pressure and Flow Capabilities/Life Requirements**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Orifice Size (mm)</th>
<th>Nominal Cv</th>
<th>Maximum Supply Pressure (psi)</th>
<th>Leak Rate (Air)</th>
<th>Power Consumption</th>
<th>Elastomer</th>
<th>Life Requirements (millions of cycles)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.030 in</td>
<td>0.017</td>
<td>100 psi (6.89 bar)</td>
<td>&lt;0.016 sccm</td>
<td>2 Watts</td>
<td>FKM</td>
<td>100</td>
</tr>
<tr>
<td>12</td>
<td>0.050 in</td>
<td>0.031</td>
<td>50 psi (3.45 bar)</td>
<td>&lt;0.016 sccm</td>
<td>2 Watts</td>
<td>FKM</td>
<td>100</td>
</tr>
<tr>
<td>13</td>
<td>0.030 in</td>
<td>0.017</td>
<td>50 psi (3.45 bar)</td>
<td>&lt;0.016 sccm</td>
<td>1 Watt</td>
<td>FKM</td>
<td>200</td>
</tr>
<tr>
<td>15</td>
<td>0.050 in</td>
<td>0.025</td>
<td>25 psi (1.72 bar)</td>
<td>&lt;0.016 sccm</td>
<td>1 Watt</td>
<td>FKM</td>
<td>200</td>
</tr>
<tr>
<td>16</td>
<td>0.030 in</td>
<td>0.017</td>
<td>25 psi (1.72 bar)</td>
<td>&lt;0.016 sccm</td>
<td>0.5 Watt</td>
<td>FKM</td>
<td>260</td>
</tr>
<tr>
<td>18</td>
<td>0.050 in</td>
<td>0.021</td>
<td>10 psi (0.69 bar)</td>
<td>&lt;0.016 sccm</td>
<td>0.5 Watt</td>
<td>FKM</td>
<td>260</td>
</tr>
<tr>
<td>19</td>
<td>0.050 in</td>
<td>0.025</td>
<td>70 psi (4.83 bar)</td>
<td>&lt;0.016 sccm</td>
<td>2 Watts</td>
<td>FKM</td>
<td>20</td>
</tr>
<tr>
<td>20</td>
<td>0.102 in</td>
<td>0.069</td>
<td>25 psi (1.72 bar)</td>
<td>1.0 sccm</td>
<td>1 Watt</td>
<td>FKM</td>
<td>25</td>
</tr>
</tbody>
</table>

*Life is dependent upon elastomeric material, duty cycle and pressures

For custom requirements please contact Applications Engineering at 603-595-1500 or ppfinfo@parker.com
**Series 11 Miniature Pneumatic Solenoid Valve**

**Pneumatic Interface**

**Manifold Mount**

**Mechanical Integration**

**Dimensions**

**Basic Dimensions, 2-Way Valve Configuration**

- PORT 1 (INLET)
- PORT 2 (OUTLET)

**Basic Dimensions, 3-Way Valve Configuration**

- PORT 1 (NORMALLY CLOSED)
- PORT 2 (COMMON)
- PORT 3 (NORMALLY OPEN)
**Series 11 Miniature Pneumatic Solenoid Valve**

**Pneumatic Interface**

**Barbed**

**Barb Options**

**1/16” (1.5 mm) Barbs**
(For 1/16” (1.5 mm) I.D. Tubing)

- .096 [2.44]
- .083 [2.11]
- .096 [2.44]
- .105 [2.67]
- .225 [5.72]

**5/64” (2 mm) Barbs**
(For 5/64” (2 mm) I.D. Tubing)

- .125 [3.18]
- .100 [2.54]
- .275 [6.99]
- .125 [3.18]

**1/8” (3 mm) Barbs**
(For 1/8” (3 mm) I.D. Tubing)

- .170 [4.32]
- .130 [3.30]
- .275 [6.99]
- .125 [3.18]
**Series 11 Miniature Pneumatic Solenoid Valve**

**Electrical Interface**

<table>
<thead>
<tr>
<th>Coil Type: Wire Leads</th>
<th>Coil Type: Quick Connect Spade</th>
</tr>
</thead>
<tbody>
<tr>
<td>(See Order Info “F”)</td>
<td>(See Order Info “Q”)</td>
</tr>
</tbody>
</table>

**Coil Type: Solder Tab**
(See Order Info “S”)

**Coil Type: 4 PC Pins**
(See Order Info “P”)

*See Isometric Drawing below*

---

**Series 11 Miniature Pneumatic Solenoid Valve**

**Electrical Interface**

<table>
<thead>
<tr>
<th>Coil Type: Quick Connect Spade (See Order Info “Q”)</th>
</tr>
</thead>
</table>

**Coil Type: 4 PC Pins**
(See Order Info “P”)

*See Isometric Drawing below*
**Series 11 Miniature Pneumatic Solenoid Valve**

**ANSI Symbols**

Pneumatic Schematics by Valve Types

**TYPE 1**
2-WAY NORMALLY CLOSED

**PRESSURE**
(2) REQMT
"DE-ENERGIZED" "ENERGIZED"

**SUPPLY**
(1) REQMT
"DE-ENERGIZED" "ENERGIZED"

**EXHAUST**

**VACUUM**
(2) SUPPLY
"DE-ENERGIZED" "ENERGIZED"

**TYPE 2**
2-WAY NORMALLY OPEN

**PRESSURE**
(3) SUPPLY
"DE-ENERGIZED" "ENERGIZED"

(2) REQMT
"DE-ENERGIZED" "ENERGIZED"

**SUPPLY**
(1) REQMT
"DE-ENERGIZED" "ENERGIZED"

**ATM**

**VACUUM**
(2) SUPPLY
"DE-ENERGIZED" "ENERGIZED"

**TYPE 3**
3-WAY NORMALLY CLOSED
3-WAY DISTRIBUTOR

**PRESSURE**
(3) EXHAUST
"DE-ENERGIZED" "ENERGIZED"

(2) REQMT
"DE-ENERGIZED" "ENERGIZED"

**SUPPLY**
(1) SUPPLY
"DE-ENERGIZED" "ENERGIZED"

**ATM**

**VACUUM**
(3) SUPPLY
"DE-ENERGIZED" "ENERGIZED"

**TYPE 4**
3-WAY NORMALLY OPEN

**PRESSURE**
(3) SUPPLY
"DE-ENERGIZED" "ENERGIZED"

(2) REQMT
"DE-ENERGIZED" "ENERGIZED"

**EXHAUST**

**VACUUM**
(1) SUPPLY
"DE-ENERGIZED" "ENERGIZED"

**TYPE 5**
2-WAY NORMALLY CLOSED
UNIDIRECTIONAL FLOW

**PRESSURE**
(2) SUPPLY OR REQMT
"DE-ENERGIZED" "ENERGIZED"

(1) SUPPLY OR REQMT
"DE-ENERGIZED" "ENERGIZED"

**SUPPLY**
(2) SUPPLY OR REQMT
"DE-ENERGIZED" "ENERGIZED"

**ATM**

**VACUUM**
(1) SUPPLY OR REQMT
"DE-ENERGIZED" "ENERGIZED"
**Series 11** Miniature Pneumatic Solenoid Valve

**Installation and Use**

**Manifold & O-Ring Dimensions & Design**

**Accessories**

**O-Ring (Manifold Seal) Dimensions**
(see Accessories table below for part numbers)

<table>
<thead>
<tr>
<th>O.D.</th>
<th>I.D.</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø.114 ±.005 [Ø2.90 ±0.13]</td>
<td>Ø.070 ±.003 [1.78 ±0.08]</td>
<td>Ø.250 [Ø6.35] REFERENCE</td>
</tr>
</tbody>
</table>

**Body Standoff**
890-000027-001
(2 required for each valve)

**Screw 4-40 x 1/2” Pan Head**
191-000100-208
(2 required for each valve)
**Series 11 Miniature Pneumatic Solenoid Valve**

**Ordering Information**

<table>
<thead>
<tr>
<th>Sample Part ID</th>
<th>Description</th>
<th>Series</th>
<th>Model Number</th>
<th>Pressure / Orifice / Power</th>
<th>Type</th>
<th>Material XX</th>
<th>Body / Poppet &amp; Seal</th>
<th>Voltage</th>
<th>Electrical Coil Connection</th>
<th>Pneumatic Connection</th>
<th>Pneumatic Connection Stem</th>
</tr>
</thead>
<tbody>
<tr>
<td>190-0007024-001</td>
<td>O-ring, Buna-N</td>
<td>11</td>
<td>0-100 psi / 0.030&quot; / 2 Watts</td>
<td>1: 2-Way NC</td>
<td>BV: Brass / FKM</td>
<td>PANEL</td>
<td>6: 5 VDC</td>
<td>12: Wire Leads, 16&quot;, No Termination</td>
<td>5: Manifold Mount</td>
<td>1: 1/16&quot; (1.5 mm) Barbs</td>
<td></td>
</tr>
<tr>
<td>190-0007024-002</td>
<td>O-ring, PTFE</td>
<td>10</td>
<td>0-50 psi / 0.030&quot; / 1 Watt</td>
<td>2: 2-Way NO</td>
<td>BV: Stainless Steel / FKM</td>
<td>PANEL</td>
<td>12: 12 VDC</td>
<td>5: PC Mount, 4 PC Pins</td>
<td>6: 1/16&quot; (1.5 mm) Barbs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>890-0000027-001</td>
<td>Body Standoff **</td>
<td>11</td>
<td>0-25 psi / 0.030&quot; / 0.5 Watt</td>
<td>3: 3-Way NC or Distributor</td>
<td>BV: Stainless Steel / FKM</td>
<td>PANEL</td>
<td>24: 24 VDC</td>
<td>7: 5/64&quot; (2 mm) Barbs</td>
<td>19: 1/8&quot; (3 mm) Barbs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>191-000115-010</td>
<td>Screw, 4-40 x 5/8&quot; Pan Head, Phillips</td>
<td>11</td>
<td>0-100 psi / 0.030&quot; / 0.5 Watt</td>
<td>4: 3-Way NO</td>
<td>BV: Stainless Steel / FKM</td>
<td>PANEL</td>
<td>24: 24 VDC</td>
<td>7: 5/64&quot; (2 mm) Barbs</td>
<td>19: 1/8&quot; (3 mm) Barbs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>190-0007024-001</td>
<td>O-ring, Buna-N</td>
<td>11</td>
<td>0-25 psi / 0.030&quot; / 0.5 Watt</td>
<td>5: 2-Way NC Universal</td>
<td>BV: Stainless Steel / FKM</td>
<td>PANEL</td>
<td>24: 24 VDC</td>
<td>7: 5/64&quot; (2 mm) Barbs</td>
<td>19: 1/8&quot; (3 mm) Barbs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>190-0007024-002</td>
<td>O-ring, PTFE</td>
<td>10</td>
<td>0-25 psi / 0.030&quot; / 0.5 Watt</td>
<td>6: 2-Way NC Universal</td>
<td>BV: Stainless Steel / FKM</td>
<td>PANEL</td>
<td>24: 24 VDC</td>
<td>7: 5/64&quot; (2 mm) Barbs</td>
<td>19: 1/8&quot; (3 mm) Barbs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Accessories**

- **190-0007024-001**: O-ring, Buna-N
- **190-0007024-002**: O-ring, PTFE
- **890-0000027-001**: Body Standoff **
- **191-000115-010**: Screw, 4-40 x 5/8" Pan Head, Phillips

**NOTE:** In order to provide the best possible solution for your application, please provide the following requirements when contacting Applications Engineering:

- Media, Inlet & Outlet Pressures
- Minimum Required Flow Rate
- System Supply Voltage
- Media
- Ambient Temperature Range

Please click on the Order On-line button or go to www.parker.com/precisionfluidics/s11 to configure your Series 11 Miniature Pneumatic Solenoid Valve. For more detailed information, visit us on the Web, or call and refer to Performance Spec. #790-002075-001 and #790-002407-001 (Model 20 only) and Drawing #890-003016-001.

For more information call +1 603 595 1500 or email ppfinfo@parker.com

Visit www.parker.com/precisionfluidics
The Series 25 miniature pneumatic solenoid valve is a robust and proven product with a reputation for reliable and consistent performance. The Series 25 miniature solenoid valve is the preferred choice of major OEM’s in the medical and analytical market. With valve bodies made from nickel-plated brass and multiple pneumatic and electrical interface options, the Series 25 miniature solenoid valve is the ideal solution for general purpose applications and those applications requiring low out-gassing and a bubble-tight seal.

**Features**
- Proven performance tested to 260 million life cycles
- Wide range of available electrical connections to simplify valve integration and control
- Manifold mount or barbed tube pneumatic configurations available or added system design flexibility
- Available Analytical and Oxygen Service Clean to minimize contamination
- RoHS compliant

**Applications**
- Oxygen Conservers and Concentrators
- Sieve Bed Switching
- Anesthesia Delivery
- Compression Therapy
- Gas Chromatography
- Insufflators
- Flow Control/Shut-off

**Product Specifications**

### Mechanical

**Valve Type:**
- 2/3 Port, Direct-acting poppet style
  - Normally Closed (NC)
  - Normally Open (NO)
  - Distributor

**Media:**
- Air, argon, helium, hydrogen, methane, nitrogen, oxygen, & other non-reacting gasses

**Operating Environment:**
- 32 to 158°F (0 to 70°C)

**Storage Temperature:**
- -40 to 158°F (-40 to 70°C)

**Dimensions:**
- Length: 1.73 in (43.9 mm)
- Width: 0.63 in (15.8 mm)
- Height: 0.67 in (17.0 mm)

**Weight:**
- 2.1 oz (60 g)

**Internal Volume:**
- 0.026 in³ (0.426 cm³)

**Filtration:**
- 40 micron (recommended)

**Oxygen Clean:**
- Call For Details

### Electrical

**Power Options:**
- 0.5, 1.0 or 2.0 Watts

**Voltage Options:**
- 5, 12 or 24 VDC
  Further power reduction may be achieved through the use of spike and hold or PWM electrical control.

**Electrical Connections:**
- Wire Leads, PC Pins, Solder Tabs, Quick Disconnect Spade

### Performance Characteristics

**Leak Rate:**
- <0.016 sccm of air (bubble tight)

**Response:**
- <30 ms cycling

**Pressure:**
- 0 to 100 psig (6.9 bar)

**Vacuum:**
- 0-27 in Hg (686 mm Hg)

**Orifice Sizes:**
- 0.030" (0.76 mm)
- 0.050" (1.27 mm)

### Wetted Materials

**Body:**
- 36000 HO2 Brass, Nickel Plated

**Stem Base:**
- 36000 HO2 Brass;

**Poppet Options:**
- FKM

**All Others:**
- 430 FR Series Stainless Steel
- 302 Series Stainless Steel
- 36000 HO2 Brass, Nickel Plated
**Series 25 Miniature Pneumatic Solenoid Valve**

**Typical Flow Curve**

All models reflect typical flow output capability based on rated pressure.

**Pressure and Flow Capabilities/Life Requirements**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Orifice Size</th>
<th>Nominal Cv</th>
<th>Maximum Supply Pressure</th>
<th>Power Consumption</th>
<th>Elastomer</th>
<th>Life Requirements (millions of cycles*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.030 in (0.76 mm)</td>
<td>0.017</td>
<td>100 psig (6.9 bar)</td>
<td>2 Watts</td>
<td>FKM</td>
<td>100</td>
</tr>
<tr>
<td>12</td>
<td>0.050 in (1.27 mm)</td>
<td>0.031</td>
<td>50 psig (3.5 bar)</td>
<td>2 Watts</td>
<td>FKM</td>
<td>100</td>
</tr>
<tr>
<td>13</td>
<td>0.030 in (0.76 mm)</td>
<td>0.017</td>
<td>50 psig (3.5 bar)</td>
<td>1 Watt</td>
<td>FKM</td>
<td>200</td>
</tr>
<tr>
<td>15</td>
<td>0.050 in (1.27 mm)</td>
<td>0.025</td>
<td>25 psig (1.7 bar)</td>
<td>1 Watt</td>
<td>FKM</td>
<td>200</td>
</tr>
<tr>
<td>16</td>
<td>0.030 in (0.76 mm)</td>
<td>0.017</td>
<td>25 psig (1.7 bar)</td>
<td>0.5 Watt</td>
<td>FKM</td>
<td>260</td>
</tr>
<tr>
<td>18</td>
<td>0.050 in (1.27 mm)</td>
<td>0.021</td>
<td>10 psig (0.7 bar)</td>
<td>0.5 Watt</td>
<td>FKM</td>
<td>260</td>
</tr>
<tr>
<td>19</td>
<td>0.050 in (1.27 mm)</td>
<td>0.025</td>
<td>70 psig (4.8 bar)</td>
<td>2 Watts</td>
<td>FKM</td>
<td>20</td>
</tr>
</tbody>
</table>

*Life is dependent upon elastomeric material, duty cycle and pressures

For custom requirements please contact Applications Engineering at 1-603-595-1500 or ppinfo@parker.com
Series 25 Miniature Pneumatic Solenoid Valve

Mechanical Integration

Dimensions

Basic Dimensions, 2-Way Valve Configuration

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PORT 1 (INLET)</td>
<td>0.594 [15.09]</td>
</tr>
<tr>
<td>PORT 2 (OUTLET)</td>
<td>0.683 [17.35]</td>
</tr>
<tr>
<td>Ø.750 [Ø19.05]</td>
<td></td>
</tr>
<tr>
<td>2X 10-32 UNF-2B X .188 [4.78] DP.</td>
<td></td>
</tr>
<tr>
<td>2X 6-32 UNF-2B X .25 [6.35] DP.</td>
<td></td>
</tr>
</tbody>
</table>

Basic Dimensions, 3-Way Valve Configuration

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PORT 1 (NORMALLY CLOSED)</td>
<td>0.594 [15.09]</td>
</tr>
<tr>
<td>PORT 2 (COMMON)</td>
<td>0.683 [17.35]</td>
</tr>
<tr>
<td>PORT 3 (NORMALLY OPEN)</td>
<td>0.67 [17.0]</td>
</tr>
<tr>
<td>Ø.750 [Ø19.05]</td>
<td></td>
</tr>
<tr>
<td>2X 10-32 UNF-2B X .188 [4.78] DP.</td>
<td></td>
</tr>
<tr>
<td>2X 6-32 UNF-2B X .25 [6.35] DP.</td>
<td></td>
</tr>
</tbody>
</table>

UNITS
IN. [mm.]
Series 25 Miniature Pneumatic Solenoid Valve

Mechanical Integration

Dimensions

Stem Options

10-32, MALE THREAD
(OPTION #4)

*Torque applied to #10-32 male fitting not to exceed 0.5 in-oz (3.5 mN-m). Use Loctite 290 or compatible liquid-curing fastener to secure mating fitting in place.

10-32, FEMALE THREAD
(OPTION #5)**

**Torque applied to #10-32 Female fitting not to exceed 0.5 in-oz (3.5 mN-m). Use 1/4 inch hex wrench to support the fitting when installing a mating, #10-32 male fitting.

Barb Options

1/16" (1.5 mm) Barb
(For 1/16" (1.5 mm) I.D. Tubing)
(OPTION #6)

Ø.096 [Ø2.44]
Ø.083 [Ø2.11]

1/8" (3 mm) Barb
(For 1/8" (3 mm) I.D. Tubing)
(OPTION #8)

Ø.170 [Ø4.32]
Ø.130 [Ø3.30]

5/64" (2 mm) Barb
(For 5/64" (2 mm) I.D. Tubing)
(OPTION #7)

Ø.125 [Ø3.18]
Ø.100 [Ø2.54]

1/4" (6.35 mm) Barb
(For 1/4" (6.35 mm) I.D. Tubing)
(OPTION #9)

Ø.190 [Ø4.83]
Ø.145 [Ø3.68]
Series 25 Miniature Pneumatic Solenoid Valve

Electrical Interface

Coil Type: Wire Leads
(See Order Info "F")

Coil Type: Quick Connect Spade
(See Order Info "Q")

Coil Type: Solder Tab
(See Order Info "S")

Coil Type: 4 PC Pins*
(See Order Info "P")
*See Isometric Drawing below

*4 PC PIN PCB Interface

PCB SOLDERING HOLE
4X Ø.052 [Ø1.32] THRU
PAD Ø.125 [Ø3.18]
Series 25 Miniature Pneumatic Solenoid Valve

ANSI Symbols

Pneumatic Schematics by Valve Types

### TYPE 1
2-WAY NORMALLY CLOSED

- **SUPPLY**: DE-ENERGIZED
- **REQMT**: ENERGIZED

### TYPE 2
2-WAY NORMALLY OPEN

- **SUPPLY**: DE-ENERGIZED
- **REQMT**: ENERGIZED

### TYPE 3
3-WAY NORMALLY CLOSED
3-WAY DISTRIBUTOR

- **SUPPLY**: DE-ENERGIZED
- **REQMT**: ENERGIZED

### TYPE 4
3-WAY NORMALLY OPEN

- **SUPPLY**: DE-ENERGIZED
- **REQMT**: ENERGIZED

**Legend:**

- **SUPPLY**: Pneumatic Source or Supply Pressure
- **EXHAUST**: Exhaust to Atmospheric Pressure
- **REQMT**: Customer Requirement or Application
- **ATM**: Atmospheric Pressure
# Series 25 Miniature Pneumatic Solenoid Valve

## Ordering Information

<table>
<thead>
<tr>
<th>Sample Part ID</th>
<th>Description</th>
<th>Series</th>
<th>Material XX</th>
<th>Body / Poppet &amp; Seal</th>
<th>Voltage</th>
<th>Electrical Coil Selection</th>
<th>Pneumatic Connection Body</th>
<th>Pneumatic Connection Stem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td>Options</td>
<td>25</td>
<td>25</td>
<td>0.030” orifice/2 Watts</td>
<td>5 VDC</td>
<td>Wire Leads, 18”, No Termination</td>
<td>Manifold Mount (3-Way NC Only)</td>
<td>10-32 Female</td>
</tr>
<tr>
<td>1</td>
<td>0-100 psi / 0.030” orifice / 2 Watts</td>
<td>2</td>
<td>2-Way NC</td>
<td>Nickel-plated Brass / FKM</td>
<td>5 VDC</td>
<td>Wire Leads, 18”, No Termination</td>
<td>Manifold Mount (3-Way NC Only)</td>
<td>10-32 Male</td>
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<tr>
<td>2</td>
<td>0-50 psi / 0.030” orifice / 1 Watt</td>
<td>2</td>
<td>2-Way NC</td>
<td>Nickel-plated Brass / FKM</td>
<td>12 VDC</td>
<td>PC Mount, 4 PC Pins</td>
<td>PC Mount, 2 solder tabs</td>
<td>1/8” (3 mm) Barbs</td>
</tr>
<tr>
<td>3</td>
<td>0-25 psi / 0.030” orifice / 0.5 Watt</td>
<td>3</td>
<td>3-Way NC or</td>
<td>Nickel-plated Brass / FKM</td>
<td>24 VDC</td>
<td>PC Mount, 2 Solder Tabs</td>
<td>Quick Connect Spade</td>
<td>1/4” (6 mm) Barbs</td>
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<td>4</td>
<td>0-25 psi / 0.030” orifice / 0.5 Watt</td>
<td>4</td>
<td>3-Way NO</td>
<td>Nickel-plated Brass / FKM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0-25 psi / 0.030” orifice / 0.5 Watt</td>
<td>5</td>
<td>3-Way NO</td>
<td>Nickel-plated Brass / FKM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0-70 psi / 0.050” orifice / 2 Watts</td>
<td>5</td>
<td>5 VDC</td>
<td>10-32 Female</td>
<td>4</td>
<td>10-32 Female</td>
<td>10-32 Female</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0-10 psi / 0.050” orifice / 0.5 Watt</td>
<td>3</td>
<td>3-Way NO</td>
<td>Nickel-plated Brass / FKM</td>
<td>16 VDC</td>
<td>3-Way NO</td>
<td>3-Way NO</td>
<td></td>
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<td>0-25 psi / 0.030” orifice / 0.5 Watt</td>
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<td>3-Way NO</td>
<td>Nickel-plated Brass / FKM</td>
<td>18 VDC</td>
<td>3-Way NO</td>
<td>3-Way NO</td>
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<tr>
<td>9</td>
<td>0-25 psi / 0.030” orifice / 0.5 Watt</td>
<td>5</td>
<td>3-Way NO</td>
<td>Nickel-plated Brass / FKM</td>
<td>19 VDC</td>
<td>3-Way NO</td>
<td>3-Way NO</td>
<td></td>
</tr>
</tbody>
</table>

### NOTE:

In order to provide the best possible solution for your application, please provide the following requirements when contacting Applications Engineering:

- Media, Inlet & Outlet Pressures
- Minimum Required Flow Rate
- System Supply Voltage
- Media
- Ambient Temperature Range

Please click on the Order On-line button [or go to www.parker.com/precisionfluidics/s11] to configure your Series 25 Miniature Pneumatic Solenoid Valve. For more detailed information, visit us on the Web, or call and refer to Performance Spec. #790-002075-001 and Drawing #890-003016-001.
Series 26 Miniature Pneumatic Solenoid Valve
15 mm Solenoid Valve

The Series 26 miniature pneumatic solenoid valve is a robust and proven product with a reputation for reliable and consistent performance. The Series 26 miniature solenoid valve is the preferred choice of major OEM’s in the medical and analytical market. With valve bodies made from nickel-plated brass and multiple pneumatic and electrical interface options, the Series 26 miniature solenoid valve is the ideal solution for general purpose applications and those applications requiring low out-gassing and a bubble-tight seal.

Applications
- Oxygen Conservers and Concentrators
- Sieve Bed Switching
- Anesthesia Delivery
- Compression Therapy
- Gas Chromatography
- Insufflators
- Flow Control/Shut-off

Features
- Proven performance tested to 260 million life cycles
- Wide range of available electrical connections to simplify valve integration and control
- Manifold mount body interface simplifies the manifold design and eases valve installation
- Available Analytical and Oxygen Service Clean to minimize contamination
- RoHS compliant

Product Specifications

**Mechanical**

<table>
<thead>
<tr>
<th>Valve Type:</th>
<th>2/3 Port, Direct-acting poppet style</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Normally Closed (NC)</td>
</tr>
<tr>
<td></td>
<td>- Normally Open (NO)</td>
</tr>
<tr>
<td></td>
<td>- Distributor</td>
</tr>
<tr>
<td><strong>Media:</strong></td>
<td>Air, argon, helium, hydrogen, methane, nitrogen, oxygen, &amp; other non-reacting gasses</td>
</tr>
<tr>
<td><strong>Operating Environment:</strong></td>
<td>32 to 158°F (0 to 70°C)</td>
</tr>
<tr>
<td><strong>Storage Temperature:</strong></td>
<td>-40 to 158°F (-40 to 70°C)</td>
</tr>
<tr>
<td><strong>Dimensions:</strong></td>
<td>Length: 1.53 in (38.8 mm)</td>
</tr>
<tr>
<td></td>
<td>Diameter: 0.75 in (19.0 mm)</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>2.1 oz (60 g)</td>
</tr>
<tr>
<td><strong>Internal Volume:</strong></td>
<td>0.026 in³ (0.426 cm³)</td>
</tr>
<tr>
<td><strong>Filtration:</strong></td>
<td>40 micron (recommended)</td>
</tr>
<tr>
<td><strong>Oxygen Clean:</strong></td>
<td>Call For Details</td>
</tr>
</tbody>
</table>

**Electrical**

| Power Options: | 0.5, 1.0 or 2.0 Watts |
| Voltage Options: | 5, 12 or 24 VDC |
| Further power reduction may be achieved through the use of spike and hold or PWM electrical control. |
| **Electrical Connections:** | Wire Leads, PC Pins, Solder Tabs, Quick Disconnect Spade |

**Wetted Materials**

| Body: | 36000 HO2 Brass, Nickel Plated |
| Stem Base: | 36000 HO2 Brass; |
| **Poppet Options:** | FKM |
| **All Others:** | 430 FR Series Stainless Steel |
|                | 302 Series Stainless Steel |
|                | 36000 HO2 Brass, Nickel Plated |

**Performance Characteristics**

| Leak Rate: | <0.016 sccm of air (bubble tight) |
| Response:  | <30 ms cycling |
| **Pressure:** | 0 to 100 psig (6.9 bar) |
| **Vacuum:** | 0-27 in Hg (686 mm Hg) |
| **Orifice Sizes:** | 0.030" (0.76 mm) |
|                | 0.050" (1.27 mm) |

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<td></td>
<td>- Distributor</td>
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<tr>
<td><strong>Media:</strong></td>
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<td><strong>Operating Environment:</strong></td>
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<td><strong>Dimensions:</strong></td>
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<td><strong>Oxygen Clean:</strong></td>
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| Voltage Options: | 5, 12 or 24 VDC |
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**Wetted Materials**

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| Stem Base: | 36000 HO2 Brass; |
| **Poppet Options:** | FKM |
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|                | 0.050" (1.27 mm) |
Series 26 Miniature Pneumatic Solenoid Valve

Typical Flow Curve

All models reflect typical flow output capability based on rated pressure.

Pressure and Flow Capabilities/Life Requirements

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Orifice Size</th>
<th>Nominal Cv</th>
<th>Maximum Supply Pressure</th>
<th>Power Consumption</th>
<th>Elastomer</th>
<th>Life Requirements (millions of cycles*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.030 in (0.76 mm)</td>
<td>0.017</td>
<td>100 psig (6.9 bar)</td>
<td>2 Watts</td>
<td>FKM</td>
<td>100</td>
</tr>
<tr>
<td>12</td>
<td>0.050 in (1.27 mm)</td>
<td>0.031</td>
<td>50 psig (3.5 bar)</td>
<td>2 Watts</td>
<td>FKM</td>
<td>100</td>
</tr>
<tr>
<td>13</td>
<td>0.030 in (0.76 mm)</td>
<td>0.017</td>
<td>50 psig (3.5 bar)</td>
<td>1 Watt</td>
<td>FKM</td>
<td>200</td>
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<tr>
<td>15</td>
<td>0.050 in (1.27 mm)</td>
<td>0.025</td>
<td>25 psig (1.7 bar)</td>
<td>1 Watt</td>
<td>FKM</td>
<td>200</td>
</tr>
<tr>
<td>16</td>
<td>0.030 in (0.76 mm)</td>
<td>0.017</td>
<td>25 psig (1.7 bar)</td>
<td>0.5 Watt</td>
<td>FKM</td>
<td>260</td>
</tr>
<tr>
<td>18</td>
<td>0.050 in (1.27 mm)</td>
<td>0.021</td>
<td>10 psig (0.7 bar)</td>
<td>0.5 Watt</td>
<td>FKM</td>
<td>260</td>
</tr>
<tr>
<td>19</td>
<td>0.050 in (1.27 mm)</td>
<td>0.025</td>
<td>70 psig (4.8 bar)</td>
<td>2 Watts</td>
<td>FKM</td>
<td>20</td>
</tr>
</tbody>
</table>

*Life is dependent upon elastomeric material, duty cycle and pressures.

For custom requirements please contact Applications Engineering at 1-603-595-1500 or ppinfo@parker.com
**Series 26 Miniature Pneumatic Solenoid Valve**

**Mechanical Integration**

**Dimensions**

---

**Basic Dimensions, 2-Way Valve Configuration**

![Diagram of 2-Way Valve Configuration]

- **Port 1** (Inlet)
  - Ø .547 [Ø13.89]
  - Ø .173 [Ø4.39]

- **Port 2** (Outlet)
  - 2X .072 [1.83] Groove Width

- **Port 3** (Normally Open)
  - Ø .357 [Ø9.07]

- #10-32 Thread Not Shown

---

**Basic Dimensions, 3-Way Valve Configuration**

![Diagram of 3-Way Valve Configuration]

- **Port 1** (Normally Closed)
  - Ø .547 [Ø13.89]
  - Ø .173 [Ø4.39]

- **Port 2** (Common)
  - 2X .072 [1.83] Groove Width

- **Port 3** (Normally Open)
  - Ø .357 [Ø9.07]

- #10-32 Thread Not Shown

---

**Units**

IN. [mm.]

---

SEE O-RING DETAIL

**NOTE:** #10-32 thread not shown.
Series 26 Miniature Pneumatic Solenoid Valve

Mechanical Integration
Dimensions

Stem Options

10-32, MALE THREAD
(OPTION #4)*

10-32, FEMALE THREAD
(OPTION #5)**

*Torque applied to #10-32 male fitting not to exceed 0.5 in-oz (3.5 mN-m). Use Loctite 290 or compatible liquid-curing fastener to secure mating fitting in place.

**Torque applied to #10-32 Female fitting not to exceed 0.5 in-oz (3.5 mN-m). Use 1/4 inch hex wrench to support the fitting when installing a mating, #10-32 male fitting.

Barb Options

1/16” (1.5 mm) Barb
(For 1/16” (1.5 mm) I.D. Tubing)
(OPTION #6)

Ø.096 [Ø2.44]
Ø.083 [Ø2.11]

5/64” (2 mm) Barb
(For 5/64” (2 mm) I.D. Tubing)
(OPTION #7)

Ø.125 [Ø3.18]
Ø.100 [Ø2.54]

1/8” (3 mm) Barb
(For 1/8” (3 mm) I.D. Tubing)
(OPTION #8)

Ø.170 [Ø4.32]
Ø.130 [Ø3.30]
Series 26 Miniature Pneumatic Solenoid Valve

Electrical Interface

Coil Type: Wire Leads
(See Order Info "F")

Coil Type: Quick Connect Spade
(See Order Info "Q")

Coil Type: Solder Tab
(See Order Info "S")

Coil Type: 4 PC Pins*
(See Order Info "P")
*See Isometric Drawing below

*4 PC PIN PCB Interface

PCB SOLDERING HOLE
4X Ø.052 [Ø1.32] THRU
PAD Ø.125 [Ø3.18]
Series 26 Miniature Pneumatic Solenoid Valve

ANSI Symbols

Pneumatic Schematics by Valve Types

**TYPE 1**
2-WAY NORMALLY CLOSED

**TYPE 3**
3-WAY NORMALLY CLOSED
3-WAY DISTRIBUTOR

**TYPE 4**
3-WAY NORMALLY OPEN

**LEGEND:**

<table>
<thead>
<tr>
<th>SUPPLY:</th>
<th>Pneumatic Source or Supply Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXHAUST:</td>
<td>Exhaust to Atmospheric Pressure</td>
</tr>
<tr>
<td>REQMT:</td>
<td>Customer Requirement or Application</td>
</tr>
<tr>
<td>ATM:</td>
<td>Atmospheric Pressure</td>
</tr>
</tbody>
</table>

**Pneumatic Schematics by Valve Types**

- **SUPPLY:** Pneumatic Source or Supply Pressure
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- **ATM:** Atmospheric Pressure
### Series 26 Miniature Pneumatic Solenoid Valve

#### Ordering Information

<table>
<thead>
<tr>
<th>Sample Part ID</th>
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<th>10</th>
<th>3</th>
<th>NV</th>
<th>12</th>
<th>P</th>
<th>4</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Series Model Number</td>
<td>Pressure / Orifice / Power</td>
<td>Type</td>
<td>Material</td>
<td>Voltage</td>
<td>Electrical Coil Selection</td>
<td>Pneumatic Connection Body</td>
<td>Pneumatic Connection Stem</td>
</tr>
<tr>
<td>12: 0-50 psig / 0.030&quot; orifice / 2 Watts</td>
<td>2: 3-Way NC or Distributor</td>
<td>6: 12 VDC</td>
<td>P: PC Mount, 4 PC Pins</td>
<td>4: 10-32 Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13: 0-50 psig / 0.030&quot; orifice / 1 Watt</td>
<td>3: 3-Way NO</td>
<td>24: 24 VDC</td>
<td>S: PC Mount, 2 Solder Tabs</td>
<td>5: 10-32 Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15: 0-25 psig / 0.050&quot; orifice / 1 Watt</td>
<td>4: 3-Way NO</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16: 0-25 psig / 0.050&quot; orifice / 0.5 Watt</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18: 0-10 psig / 0.050&quot; orifice / 0.5 Watt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19: 0-70 psig / 0.050&quot; orifice / 0.5 Watt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6: 10-32 Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7: 1/16&quot; (1.5 mm) Barbs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8: 5/64&quot; (2 mm) Barbs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9: 1/8&quot; (3 mm) Barbs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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For more information call +1 603 595 1500 or email ppfinfo@parker.com
Visit www.parker.com/precisionfluidics