Parker
Pneumatic

Cyclone Direct Acting Solenoid Valves

2 & 3-Way Directional Control

Catalog VAL-CYC-2/USA
July, 1998

Schrader Bellows®

www.comoso.com

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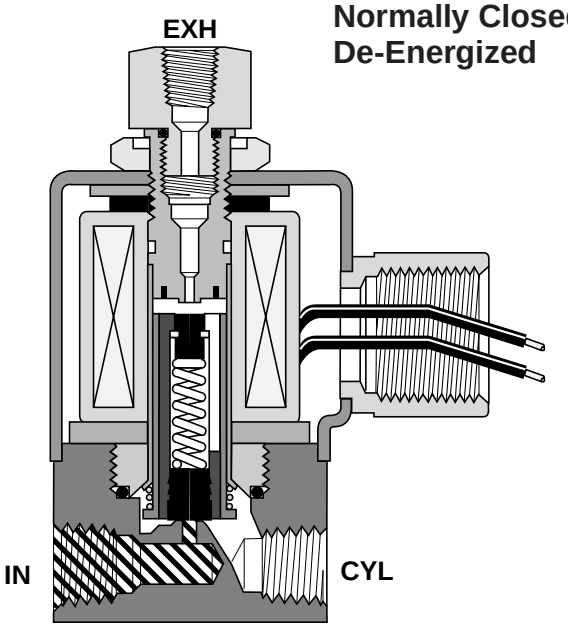
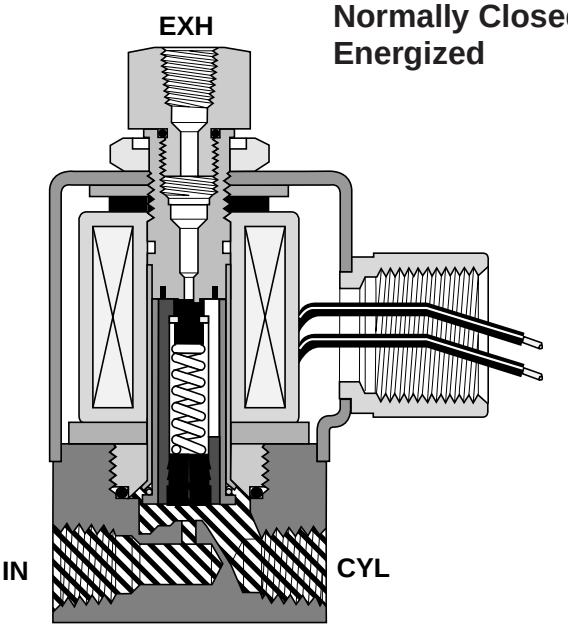
- 2 & 3-Way, 2-Position.
- C_V = .02 to .73 depending on orifice structure and flow path.
- Inline or surface mounted.
- Used with inert liquids and gases. (Consult factory for compatibility.)
- 1/8 and 1/4 inch Ports.
- Standard class “B” coil (Class “H” optional) rated for continuous duty in a variety of voltages.
- Grommet or Conduit housings with 18 inch leads.
- Rotatable housings for ease of installation.
- Hazardous Duty & NEMA 4 enclosures available.
- Copper shading ring standard.
- Self compensating seals increase valve life.
- Approved to be CE marked.
- CSA Standard.
- UL for Hazardous Duty.
- Stainless steel body (standard) Brass (optional).
- Proven extended life reliability.

3-Way
Normally Closed
De-Energized



Pressure **Exhaust**

3-Way
Normally Closed
Energized



Pressure **Exhaust**

Basic Series	Housing Type	Valve Type	Port Size	Orifice	Options	Seals	Coil Class & Hertz	Voltage
7	5	3	1	2	0	1	1	5

Basic Series

7

Housing Type

4	Conduit
5	Grommet
7	J.I.C. **
8	Strap

** Meets NEMA 4 specifications

Valve Type

0	2-Way N.O.
1	2-Way N.C.
2	3-Way N.O.
3	3-Way N.C. Free Vent
4	3-Way N.C., Piped Exhaust
5	3-Way Multi-Purpose
6	3-Way Dir. Cont.

Port Size

0	1/8" S.S.
1	1/4" S.S.
2	1/8" Brass
3	1/4" Brass

Orifice

0	1/32" Body, 1/32" Stop
1	3/64" Body, 3/64" Stop 1/16" Body*
2	3/64" Body, 1/16" Stop
3	1/16" Body, 1/16" Stop
4	3/32" Body, 3/32" Stop
5	1/8" Body, 1/16" Stop
6	1/8" Body, 3/32" Stop
7	5/32" Body, 3/32" Stop
8	3/16" Body, 3/32" Stop
9	7/32" Body, 3/32" Stop

* Used in Normally Open 3-Way Valves Only.

Options

0	None (Std)

Seals

1	Nitrile (Buna)
2	Viton

Coil Class & Hertz

1	"B" 60 Hz
2	"B" DC
3	"B" 50 Hz
7	Spade "B" 60 Hz†
8	Spade "B" DC †
9	"H" 60 Hz ††
0	"H" DC ††

† Available with Strap Housing Only.
†† All Valves with class "H" coils contain Viton Seals.

Voltage

1	6 VDC
2	12 VDC
	12 VAC
3	24 VDC
	24 VAC
4	48 VAC
5	120 VDC
	120 VAC
6	240 VAC

NOTES: Shaded units are not standard stock items.

Hazardous Duty Valves (UL Approved)

Basic Series	Housing Type	Valve Type	Port Size	Orifice	Options	Seals	Coil Class & Hertz	Voltage
7	6	4	1	4	0	1	1	5

Basic Series

7

Housing Type

6	Hazardous Duty

Valve Type

0	2-Way N.O.
1	2-Way N.C.
2	3-Way N.O.
3	3-Way N.C. Free Vent
4	3-Way N.C., Piped Exhaust
5	3-Way Multi-Purpose
6	3-Way Dir. Cont.

Port Size

0	1/8"
1	1/4"

Orifice

0	1/32" Body, 1/32" Stop
1	3/64" Body, 3/64" Stop 1/16" Body*
2	3/64" Body, 1/16" Stop
3	1/16" Body, 1/16" Stop
4	3/32" Body, 3/32" Stop
5	1/8" Body, 1/16" Stop
6	1/8" Body, 3/32" Stop
7	5/32" Body, 3/32" Stop
8	3/16" Body, 3/32" Stop
9	7/32" Body, 3/32" Stop

* Used in Normally Open 3-Way Valves Only.

Options

0	None (Std)

Seals

1	Nitrile (Buna)

Coil Class & Hertz

1	"B" 60 Hz
2	"B" DC

Voltage

2	12 VDC
3	24 VDC
	24 VAC
5	120 VAC
6	240 VAC

NOTES: Shaded units are not standard stock items.
For 2-Way, Normally Closed Valves, Orifice Structures 2 & 6 are not valid.
For 2-Way, Normally Open Valves, use Orifice Structures 0, 1, 2 & 4 only.

EXAMPLE: Solenoid Valve #75312 0115

75	3	1	2	0	1	1	5
Valve w/ Grommet Housing	3-Way Normally Closed Free Venting	1/4" Ports	3/64" body (orifice dia.) 1/16" stop (orifice dia.)	Standard (No options)	Buna N Seals	Class "B" Coil 60 Hz	120 Volts

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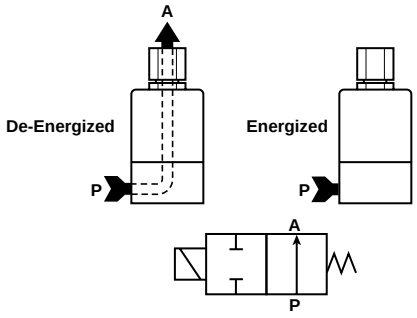
Normally Open

Application
These valves provide on-off control of inert liquids and gases.

Mounting
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation
De-energized position – Flow is permitted from inlet Port P out Port A at the top of the valve.

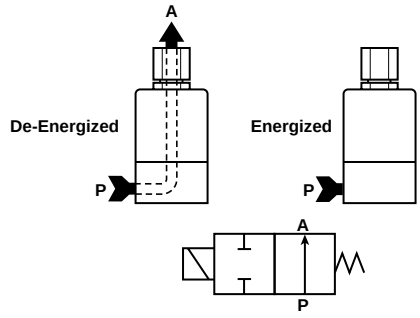
Energized position – Pressure at inlet Port P is blocked, shutting off flow to Port A.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orifice/C_V		Conduit Housing	
AC & DC	Stop	C_V	1/8" Ports	1/4" Ports
300	1/32"	.02	74000 0115	74010 0115
200	3/64"	.06	74001 0115	74011 0115
150	1/16"	.12	74002 0115	74012 0115
125	3/32"	.21	74004 0115	74014 0115

Note: For GROMMET HOUSING change the second digit in the model number from 4 to 5.
* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)



Normally Open
Hazardous Duty

Application
These valves normally operate in hazardous environments and provide on-off control of inert liquids and gases. (See Technical & Service Data for **U.L.** Approvals).

Mounting
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation
De-energized position – Flow is permitted from inlet Port P out Port A at the top of the valve.

Energized position – Pressure at inlet Port P is blocked, shutting off flow to Port A.

Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orifice/C_V		Conduit Housing	
AC & DC	Stop	C_V	1/8" Ports	1/4" Ports
300	1/32"	.02	76000 0115	76010 0115
200	3/64"	.06	76001 0115	76011 0115
150	1/16"	.12	76002 0115	76012 0115
125	3/32"	.21	76004 0115	76014 0115

* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)
Note: Unshaded Model Numbers indicate stocked items.

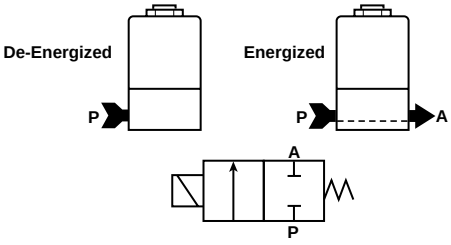
Normally Closed

Application
These valves provide on-off control of inert liquids and gases.

Mounting
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation
De-energized position – Pressure at inlet Port P is blocked, preventing flow to Port A.

Energized position – Flow is permitted from inlet Port P through the valve body to Port A.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)		Orifice/C_V		Conduit Housing	
AC	DC	Body	C_V	1/8" Ports	1/4" Ports
500	500	1/32"	.02	74100 0115	74110 0115
250	250	3/64"	.06	74101 0115	74111 0115
200	200	1/16"	.11	74103 0115	74113 0115
125	125	3/32"	.21	74104 0115	74114 0115
100	100	1/8"	.34	74105 0115	74115 0115
75	50	5/32"	.37	74107 0115	74117 0115
50	25	3/16"	.52	74108 0115	74118 0115
25	10	7/32"	.62	74109 0115	74119 0115

Note: For GROMMET HOUSING change the second digit in the model number from 4 to 5.
* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)

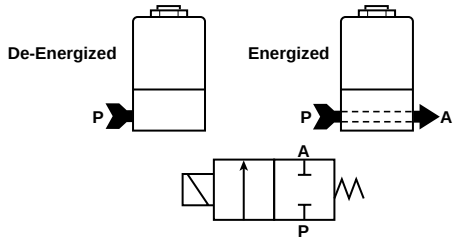
Normally Closed
Hazardous Duty

Application
These valves normally operate in hazardous environments and provide on-off control of inert liquids and gases. (See Technical & Service Data for **U.L.** Approvals).

Mounting
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation
De-energized position – Pressure at inlet Port P is blocked, preventing flow to Port A.

Energized position – Flow is permitted from inlet Port P through the valve body to Port A.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)		Orifice/C_V		Conduit Housing	
AC	DC	Body	C_V	1/8" Ports	1/4" Ports
500	500	1/32"	.02	76100 0115	76110 0115
250	250	3/64"	.06	76101 0115	76111 0115
200	200	1/16"	.11	76103 0115	76113 0115
125	125	3/32"	.21	76104 0115	76114 0115
100	100	1/8"	.34	76105 0115	76115 0115
75	50	5/32"	.37	76107 0115	76117 0115
50	25	3/16"	.52	76108 0115	76118 0115
25	10	7/32"	.62	76109 0115	76119 0115

* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)
Note: Unshaded Model Numbers indicate stocked items.

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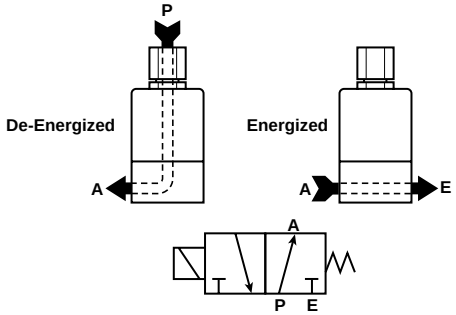
Normally Open

Application
These valves are used to provide pilot signals for larger valves, operate single acting cylinders, or are used in pairs to operate double acting cylinders.

Mounting
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation
De-energized position – Flow is permitted from inlet Port P at the top of the valve out Port A in the valve body. Exhaust Port E is blocked.

Energized position – Inlet Port P at the top of the valve is blocked. Port A is exhausted through the valve body to Port E.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orientation/Cv				Conduit Housing	
AC & DC	Body	Cv	Stop	Cv	1/8" Ports	1/4" Ports
200	1/32"	.02	1/32"	.02	74200 0115	74210 0115
150	1/16"	.11	3/64"	.06	74201 0115	74211 0115
100	1/8"	.34	1/16"	.10	74205 0115	74215 0115
75	1/8"	.34	3/32"	.18	74206 0115	74216 0115
50	5/32"	.37	3/32"	.18	74207 0115	74217 0115
25	3/16"	.52	3/32"	.18	74208 0115	74218 0115
10	7/32"	.62	3/32"	.18	74209 0115	74219 0115

Note: For GROMMET HOUSING change the second digit in the model number from 4 to 5.
* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)

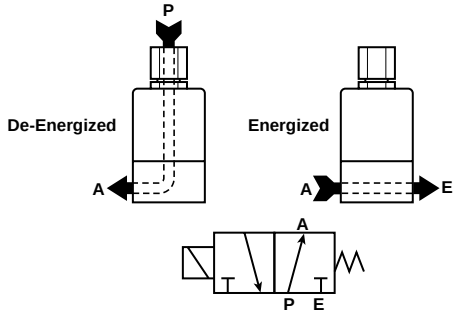
Normally Open
Hazardous Duty

Application
These valves normally operate in hazardous environments and are used to provide pilot signals for larger valves, operate single acting cylinders, or are used in pairs to operate double acting cylinders (See Technical & Service Data for **U.L.** Approvals).

Mounting
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation
De-energized position – Flow is permitted from inlet Port P at the top of the valve out Port A in the valve body Exhaust Port E is blocked.

Energized position – Inlet Port P at the top of the valve is blocked. Port A is exhausted through the valve body to Port E.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orientation/Cv				Conduit Housing	
AC & DC	Body	Cv	Stop	Cv	1/8" Ports	1/4" Ports
200	1/32"	.02	1/32"	.02	76200 0115	76210 0115
150	1/16"	.11	3/64"	.06	76201 0115	76211 0115
100	1/8"	.34	1/16"	.10	76205 0115	76215 0115
75	1/8"	.34	3/32"	.18	76206 0115	76216 0115
50	5/32"	.37	3/32"	.18	76207 0115	76217 0115
25	3/16"	.52	3/32"	.18	76208 0115	76218 0115
10	7/32"	.62	3/32"	.18	76209 0115	76219 0115

* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)
Note: Unshaded Model Numbers indicate stocked items.

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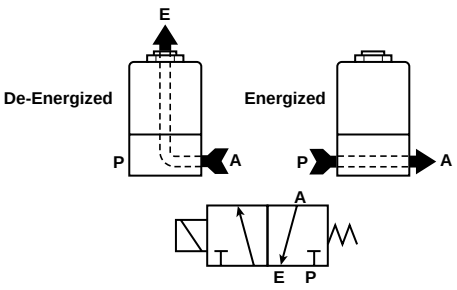
Normally Closed
Free Venting

Application
These valves are used to provide pilot signals for larger valves, operate single acting cylinders, or are used in pairs to operate double acting cylinders.

Mounting
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation
De-energized position – Inlet Port P is blocked. Port A is exhausted out the top of the valve to Port E.

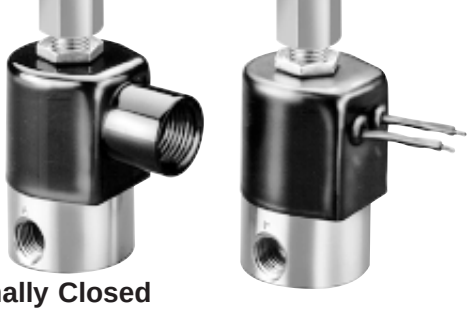
Energized position – Flow is permitted from inlet Port P through the valve body to Port A. Exhaust Port E at the top of the valve is blocked.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orifice/Cv				Conduit Housing	
AC & DC	Body	Cv	Stop	Cv	1/8" Ports	1/4" Ports
250	1/32"	.02	1/32"	.02	74300 0115	74310 0115
175	3/64"	.06	1/16"	.12	74302 0115	74312 0115
125	1/16"	.10	1/16"	.12	74303 0115	74313 0115
90	3/32"	.20	3/32"	.21	74304 0115	74314 0115
65	1/8"	.32	3/32"	.21	74306 0115	74316 0115
40	5/32"	.42	3/32"	.21	74307 0115	74317 0115
20	3/16"	.52	3/32"	.21	74308 0115	74318 0115
10	7/32"	.73	3/32"	.21	74309 0115	74319 0115

Note: For GROMMET HOUSING change the second digit in the model number from 4 to 5.
* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)



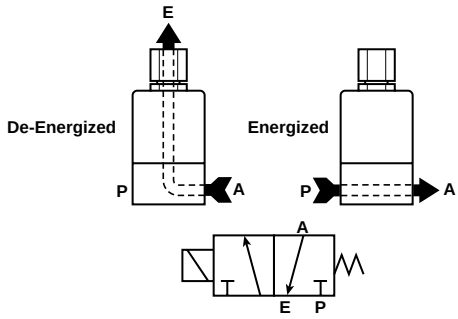
Normally Closed
Pipe Exhaust

Application
These valves operate similar to 3-Way normally closed, free venting, but are used where the exhaust needs to be piped away from the valve.

Mounting
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation
De-energized position – Inlet Port P is blocked. Port A is exhausted out the top of the valve to Port E.

Energized position – Flow is permitted from inlet Port P through the valve body to Port A. Exhaust Port E at the top of the valve is blocked.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orifice/Cv				Conduit Housing	
AC & DC	Body	Cv	Stop	Cv	1/8" Ports	1/4" Ports
250	1/32"	.02	1/32"	.02	74400 0115	74410 0115
175	3/64"	.06	1/16"	.12	74402 0115	74412 0115
125	1/16"	.10	1/16"	.12	74403 0115	74413 0115
90	3/32"	.20	3/32"	.21	74404 0115	74414 0115
65	1/8"	.32	3/32"	.21	74406 0115	74416 0115
40	5/32"	.42	3/32"	.21	74407 0115	74417 0115
20	3/16"	.52	3/32"	.21	74408 0115	74418 0115
10	7/32"	.73	3/32"	.21	74409 0115	74419 0115

Note: For GROMMET HOUSING change the second digit in the model number from 4 to 5.
* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)
Note: Unshaded Model Numbers indicate stocked items.

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Normally Closed
Hazardous Duty

Application

These valves normally operate in hazardous environments and are used to provide pilot signals for larger valves, operate single acting cylinders, or are used in pairs to operate double acting cylinders (See Technical & Service Data for **U.L.** Approvals).

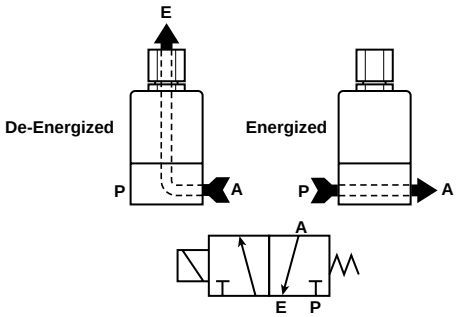
Mounting

These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation

De-energized position – Inlet Port P is blocked. Port A is exhausted out the top of the valve to Port E.

Energized position – Flow is permitted from inlet Port P through the valve body to Port A. Exhaust Port E at the top of the valve is blocked.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orifice/Cv				Conduit Housing	
AC & DC	Body	Cv	Stop	Cv	1/8" Ports	1/4" Ports
250	1/32"	.02	1/32"	.02	76400 0115	76410 0115
175	3/64"	.06	1/16"	.12	76402 0115	76412 0115
125	1/16"	.10	1/16"	.12	76403 0115	76413 0115
90	3/32"	.20	3/32"	.21	76404 0115	76414 0115
65	1/8"	.32	3/32"	.21	76406 0115	76416 0115
40	5/32"	.42	3/32"	.21	76407 0115	76417 0115
20	3/16"	.52	3/32"	.21	76408 0115	76418 0115
10	7/32"	.73	3/32"	.21	76409 0115	76419 0115

* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)

Directional Control

Application

These valves are used to select the directional flow of inert liquids and gases out either of two working ports.

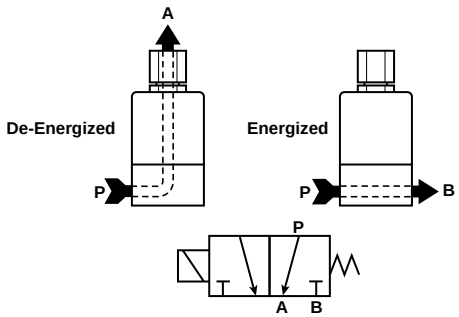
Mounting

These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation

De-energized position – Flow is permitted from inlet Port P in the valve body out Port A at the top of the valve. Port B in the valve body is blocked.

Energized position - Flow is permitted from inlet Port P through the valve body to Port B. Port A at the top of the valve is blocked.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orifice/Cv				Conduit Housing	
AC & DC	Body	Cv	Stop	Cv	1/8" Ports	1/4" Ports
300	1/32"	.02	1/32"	.02	74600 0115	74610 0115
200	3/64"	.06	3/64"	.06	74601 0115	74611 0115
150	1/16"	.11	1/16"	.12	74603 0115	74613 0115
125	3/32"	.21	3/32"	.21	74604 0115	74614 0115
100	1/8"	.34	3/32"	.21	74606 0115	74616 0115
75	5/32"	.37	3/32"	.21	74607 0115	74617 0115
50	3/16"	.52	3/32"	.21	74608 0115	74618 0115

Note: For GROMMET HOUSING change the second digit in the model number from 4 to 5.
* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)
Note: Unshaded Model Numbers indicate stocked items.

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Directional Control
Hazardous Duty

Application

These valves normally operate in hazardous environments and are used to select the directional flow of inert liquids and gases out either of two working ports. (See Technical & Service Data for **U.L.** Approvals).

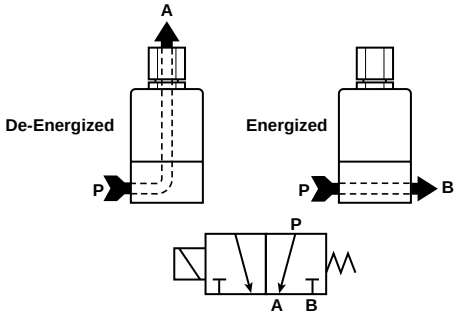
Mounting

These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation

De-energized position – Flow is permitted from inlet Port P in the valve body out Port A at the top of the valve. Port B in the valve body is blocked.

Energized position – Flow is permitted from inlet Port P through the valve body to Port B. Port A at the top of the valve is blocked.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orifice/Cv				Conduit Housing	
AC & DC	Body	Cv	Stop	Cv	1/8" Ports	1/4" Ports
300	1/32"	.02	1/32"	.02	76600 0115	76610 0115
200	3/64"	.06	3/64"	.06	76601 0115	76611 0115
150	1/16"	.11	1/16"	.12	76603 0115	76613 0115
125	3/32"	.21	3/32"	.21	76604 0115	76614 0115
100	1/8"	.34	3/32"	.21	76606 0115	76616 0115
75	5/32"	.37	3/32"	.21	76607 0115	76617 0115
50	3/16"	.52	3/32"	.21	76608 0115	76618 0115

* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)

Note: Unshaded Model Numbers indicate stocked items.

Multi-Purpose

Application

These valves may be used in six different ways (see description on next page). In the 2-Way configuration, valves provide on-off control of inert liquids and gases.
In the 3-Way configuration, valves provide pilot signals to larger valves, operate single acting cylinders, or are used in pairs to operate double acting cylinders.

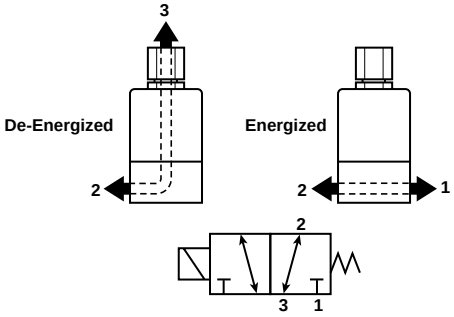
Mounting

These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation

De-energized position – Port 2 in the valve body is connected to Port 3 at the top of the valve. Port 1 is blocked.

Energized position – Port 2 is connected through the valve body to Port 1. Port 3 at the top of the valve is blocked.



Model Selection (Listed for 120V/60Hz.)*

**M.O.P.D. (PSIG)	Orifice/Cv				Conduit Housing	
AC & DC	Body	Cv	Stop	Cv	1/8" Ports	1/4" Ports
250	1/32"	.02	1/32"	.02	74500 0115	74510 0115
150	3/64"	.06	3/64"	.06	74501 0115	74511 0115
100	1/16"	.10	1/16"	.10	74503 0115	74513 0115
75	3/32"	.20	3/32"	.18	74504 0115	74514 0115
50	1/8"	.32	3/32"	.18	74506 0115	74516 0115
30	5/32"	.42	3/32"	.18	74507 0115	74517 0115
10	3/16"	.52	3/32"	.18	74508 0115	74518 0115
10	7/32"	.73	3/32"	.18	74509 0115	74519 0115

Note: For GROMMET HOUSING change the second digit in the model number from 4 to 5.
* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)

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Multi-Purpose
Hazardous Duty

Application

These valves normally operate in hazardous environments and may be used in six different ways (see description on this page). In the 2-Way configuration, valves provide on-off control, of inert liquids and gases. In the 3-Way configuration, valves provide pilot signals for larger valves, operate single acting cylinders, or are used in pairs to operate double-acting cylinders (See Technical & Service Data for **U.L.** Approvals).

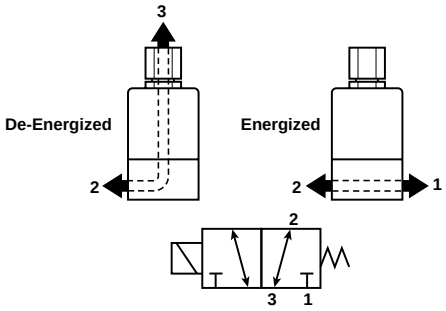
Mounting

These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the bottom of the valve body. The solenoid housing rotates for ease of electrical connections.

Operation

De-energized position – Port 2 in the valve body is connected to Port 3 at the top of the valve. Port 1 is blocked.

Energized position – Port 2 is connected through the valve body to Port 1. Port 3 at the top of the valve is blocked.



Model Selection (Listed for 120V/60Hz.)*

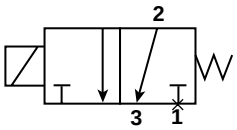
**M.O.P.D. (PSIG)	Orifice/C_V				Conduit Housing	
AC & DC	Body	C_V	Stop	C_V	1/8" Ports	1/4" Ports
250	1/32"	.02	1/32"	.02	76500 0115	76510 0115
150	3/64"	.06	3/64"	.06	76501 0115	76511 0115
100	1/16"	.10	1/16"	.10	76503 0115	76513 0115
75	3/32"	.20	3/32"	.18	76504 0115	76514 0115
50	1/8"	.32	3/32"	.18	76506 0115	76516 0115
30	5/32"	.42	3/32"	.18	76507 0115	76517 0115
10	3/16"	.52	3/32"	.18	76508 0115	76518 0115
10	7/32"	.73	3/32"	.18	76509 0115	76519 0115

* See Valve Model Number System for other voltages.
** (Maximum Operating Pressure Differential)
Note: Unshaded Model Numbers indicate stocked items.

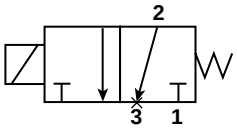
Multi-Purpose Valve Functions

The basic 3-Way multi-purpose valve can be field converted to perform as any one of the following:

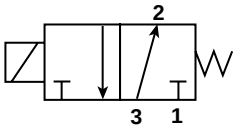
1. *2-Way Normally Open* – Plug Port 1 / use Port 2 as the inlet.



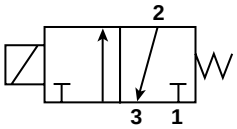
2. *2-Way Normally Closed* – Plug Port 3 / use Port 2 as the inlet.



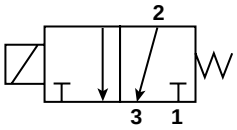
3. *3-Way Normally Open* – Use Port 3 as the inlet / use Port 1 as the exhaust / use Port 2 as the working line.



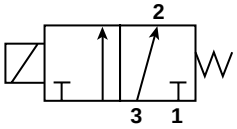
4. *3-Way Normally Closed* – Use Port 1 as the inlet / use Port 3 as the exhaust / use Port 2 as the working line.



5. *Directional Control Valve* – Use Port 2 as inlet / use Port 3 as the normally open working line / use Port 1 as the normally closed working line.



6. *Selector Valve* – Use Ports 1 and 3 as the inlets / use Port 2 as the working line.



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Strap Housing

Application

The strap housing may be ordered with flying lead or spade connector coils (shown) in any 2 or 3-Way *general purpose* valve configuration previously shown. The strap housing is used where NEMA Type 1 or 2 housings are not required. To order, see Valve Model Number System.

Mounting

These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the valve body. Spade Terminal coils provide quick and convenient electrical connection.

Operation

This style housing can be used on any general purpose valve configuration available. Reference the appropriate **Operation** section for the desired valve function.

J.I.C. Enclosures

Application

A J.I.C. junction box may be ordered in any 2 or 3-Way general purpose valve configuration previously shown. J.I.C. enclosures are rated NEMA 4 for water-tight and dust-tight service and eliminate the need for an external splice box. To order, see Valve Model Number System.

Mounting

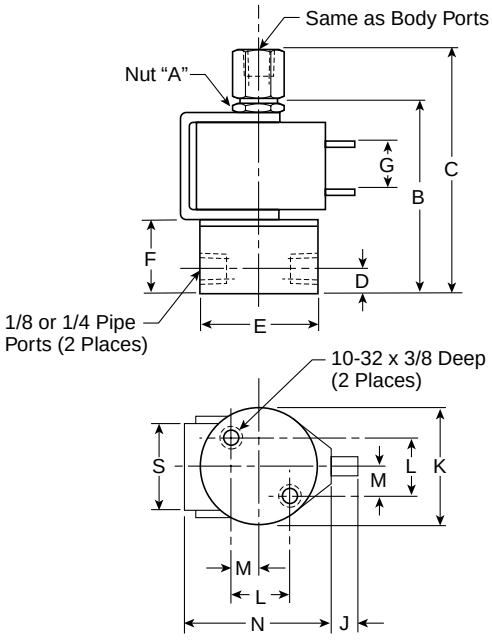
These valves may be oriented in any position and can be mounted inline or surface mounted using the two #10-32 x 3/8" holes provided in the valve body.

Operation

This style housing can be used on any general purpose valve configuration available. Reference the appropriate **Operation** section for the desired valve function.

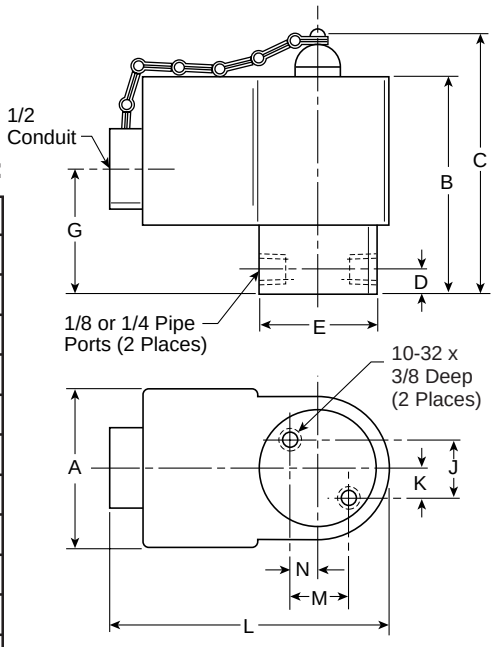
Dimensions:

	inches	mm
B	2.89	73
C	3.59	91
D	.34	9
E	1.63	41
F	.94	24
G	.66	17
J	.38	10
K	1.63	41
L	.88	22
M	.44	11
N	1.88	48
S	1.25	32



Dimensions:

	inches	mm
A	2.25	57
B	3.06	.78
C	3.77	96
D	.34	9
E	1.63	41
G	1.75	44
J	.38	10
K	.44	11
L	3.55	90
M	.88	22
N	.44	11



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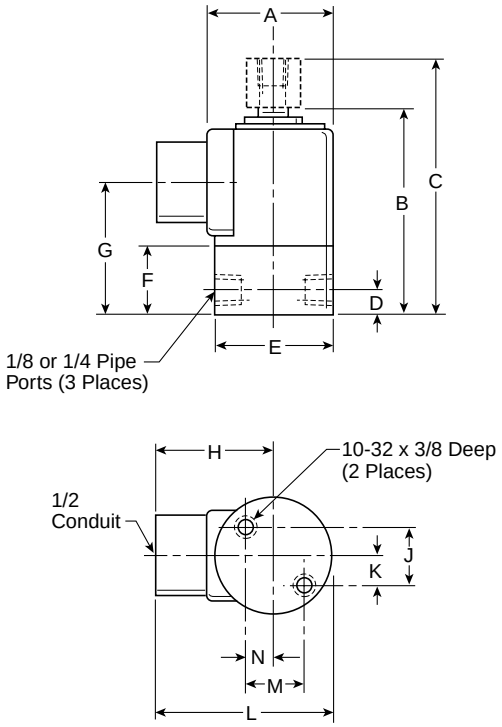
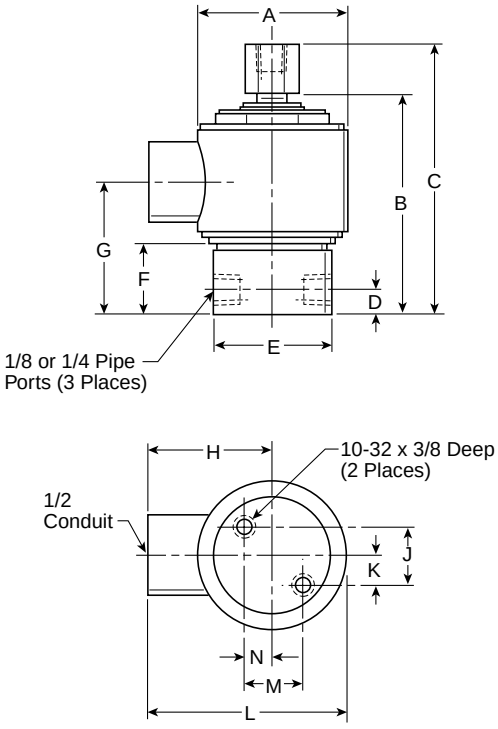
General Purpose Valve



Dimensions:

	inches	mm
A	1.55	39
B	2.89	73
C	3.59	91
D	.34	9
E	1.63	41
F	.94	24
G	1.83	46
H	1.63	41
J	.88	22
K	.44	11
L	2.38	60
M	.88	22
N	.44	11

Hazardous Duty Valve



Dimensions:

	inches	mm
A	2.13	54
B	3.22	82
C	3.91	99
D	.34	9
E	1.63	41
F	1.06	27
G	1.75	44
H	1.75	44
J	.88	22
K	.44	11
L	2.81	71
M	.88	22
N	.44	11

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Operating Pressure

Vacuum to the Maximum Operating Pressure Differential (M.O.P.D.) assigned to the orifice structure chosen from valve selection chart. M.O.P.D. is the maximum allowable difference between pressures recorded at any two working ports of the valve. If the M.O.P.D. is not known, regard the M.O.P.D. as the supply pressure.

Maximum Pressure: up to 500 PSIG

Temperature Range (Ambient)

Continuous Duty
20°F to 125°F (Class "B" Coils)
20°F to 180°F (Class "H" Coils, Viton Seals)

Intermittent Duty
20°F to 180°F (Class "B" Coils)
20°F to 270°F (Class "H" Coils, Viton Seals)

Materials

Body: Stainless Steel Type 416F, Brass (optional)

Internal Components: Stainless Steel Type 302, 304 and 430F

Shading Ring: Copper

Seals: Buna N (standard); Viton (optional)

Coil: Class "B" (standard), Class "H" (optional) Epoxy Encapsulated

Hazardous Duty Solenoid Listing

Valves designated for hazardous locations are U.L. Approved as follows:

National Electric Code*	Ambient Conditions
Class I Div. 1 Group C	Ethyl, Ether, Etc. Gases & Vapors
Class I Div. 1 Group D	Gasoline, Etc. Gases & Vapors
Class II Div. 1 Group E	Metal Dust
Class II Div. 1 Group F	Coal, Coke, Carbon Black Dust
Class II Div. 1 Group G	Flour, Starch, Grain Dust

* See Article 500 - Hazardous (Classified) Locations, National Electric Code.
Not available with class "H" coil.

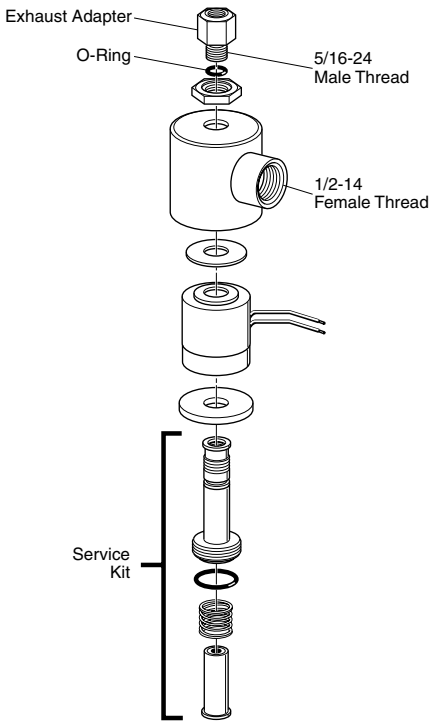
Service Kits (All Valves)

	Stop (Top) Orifice				
Function	**1/32"**	**3/64"**	**1/16"**	**3/32"**	**None**
3-Way N.C.	74400 8031	74400 8046	74400 8062	74400 8093	—
3-Way N.O.	74200 8031	74200 8046	74200 8062	74200 8093	—
3-Way M.P.	74500 8031	74500 8046	74500 8062	74500 8093	—
3-Way Dir. Cntrl	74600 8031	74600 8046	74600 8062	74600 8093	—
2-Way N.O.	74000 8031	74000 8046	74000 8062	74000 8093	—
2-Way N.C.	—	—	—	—	74100 8000

NOTE: FOR VITON SEALS CHANGE THE 7th DIGIT IN PART NUMBER FROM "0" TO "6". EXAMPLE: 744008031 WOULD BE 744008631 FOR VITON SEALS.

	1/8" Pipe	1/4" Pipe
Exhaust Adapter (Includes O-ring)	74400 8000 (BUNA)	74410 8000 (BUNA)
	74400 8600 (VITON)	74410 8600 (VITON)

NOTE: To service, use spanner wrench **74000 7100**.



Replacement Coils & Electrical Data

Coil Number (19" Leads)		Voltage*			Electrical Data			
Class "B"	Class "H"	AC		DC	AC (60Hz)		DC	DC Ohms Resistance
		60Hz	50Hz		Inrush	Hold	Hold	
74000 7142	74000 7292	**12**	–	–	3.90	1.58	–	1.25
74000 7143	74000 7293	**24**	22	6	1.66	1.14	1.35	4.45
74000 7152	74000 7202	48	43	**12**	.84	.71	.74	16.20
74000 7153	74000 7203	100	92	**24**	NA	NA	.37	65
74000 7145	74000 7295	**120**	**110**	28	.29	.18	.23	122
74000 7146	74000 7296	**240**	**220**	70	.11	.06	NA	610
74000 7155	74000 7205	330	300	**110**	NA	NA	.07	1480

Note: Shaded areas indicate extended delivery times should be expected, consult supplier for availability.
Bold Face type indicates primary coil rating.
Other voltages and lead lengths may be available, consult supplier.
* Voltage range +10/-15% of nominal.

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Notes

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Notes

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Offer of Sale

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1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.

2. Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 18 months from date of shipment from Parker Hannifin Corporation. THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.

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5. Limitation of Remedy: SELLER'S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER'S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS ARISING FROM OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY.

6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

7. Special Tooling: A tooling charge may be imposed for any special tooling, including without limitations, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer, or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

10. Indemnity For Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter "Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgements resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

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Parker Hannifin Corporation
6035 Parkland Blvd.
Cleveland, Ohio 44124-4141
Telephone: (216) 896-3000
Fax: (216) 896-4000
Web site: www.parker.com

Parker Hannifin Corporation

About Parker Hannifin Corporation

Parker Hannifin is a leading global motion-control company dedicated to delivering premier customer service. A Fortune 500 corporation listed on the New York Stock Exchange (PH), our components and systems comprise over 1,400 product lines that control motion in some 1,000 industrial and aerospace markets. Parker is the only manufacturer to offer its customers a choice of hydraulic, pneumatic, and electromechanical motion-control solutions. Our Company has the largest distribution network in its field, with over 7,500 distributors serving more than 350,000 customers worldwide.

Parker's Charter

To be a leading worldwide manufacturer of components and systems for the builders and users of durable goods. More specifically, we will design, market and manufacture products controlling motion, flow and pressure. We will achieve profitable growth through premier customer service.

Product Information

North American customers seeking product information, the location of a nearby distributor, or repair services will receive prompt attention by calling the Parker Product Information Center at our toll-free number: 1-800-C-PARKER (1-800-272-7537). In the UK, a similar service is available by calling 0500-103-203.

The Aerospace Group is a leader in the development, design, manufacture and servicing of control systems and components for aerospace and related high-technology markets, while achieving growth through premier customer service.

The Climate & Industrial Controls Group designs, manufactures and markets system-control and fluid-handling components and systems to refrigeration, air-conditioning and industrial customers worldwide.

The Fluid Connectors Group designs, manufactures and markets rigid and flexible connectors, and associated products used in pneumatic and fluid systems.

The Seal Group designs, manufactures and distributes industrial and commercial sealing devices and related products by providing superior quality and total customer satisfaction.

The Hydraulics Group designs, produces and markets a full spectrum of hydraulic components and systems to builders and users of industrial and mobile machinery and equipment.

The Filtration Group designs, manufactures and markets quality filtration and clarification products, providing customers with the best value, quality, technical support, and global availability.

The Automation Group is a leading supplier of pneumatic and electromechanical components and systems to automation customers worldwide.

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Parker Hannifin Corporation
Pneumatic Division North America
8676 E. M89
P.O. Box 901
Richland, MI 49083 USA
Tel: (616) 629-5000
Fax: (616) 629-5385

Customer/Technical Service

Tel: (616) 629-5575
Fax: (800) 648-5480
Fax: (800) 426-3259
Web site: www.schraderbellows.com
E-mail: PDNMKTG@parker.com

Catalog VAL-CYC-2/USA 1/99 5M IGS Printed in U.S.A.

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