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Miniature Multimedia Valves Precision Fluidics





ENGINEERING YOUR SUCCESS.



ENGINEERING YOUR SUCCESS.

When you partner with the global leader in motion and control technologies, expect to move your business and the world forward. From miniature multimedia valves to highly integrated automation systems, our innovations are critical to life-saving medical devices and scientific instruments used for drug discovery and pathogen detection. Not to mention, critical to decreasing time to market and lowering your overall cost of ownership. So partner with Parker, and get ready to move, well, anything.



Table of Contents

	product		page
	Series 1	3-Way Inert Isolation PTFE Valve	4
(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Series 2	2-Way Inert Isolation PTFE Valve	6
	Series 3	2-Way & 3-Way General Purpose Valve	8
	Series 9	2-Way & 3-Way Extreme Performance Valve	10
	Series 99	Ultra Low Leak Extreme Performance Valve	12
	Pulse Valves	Ultra Low Leak Extreme Performance Valve	14
- A	Series 18 Isolation Manifold	Chemically Inert Manifold Valve	16
	Series 27 Isolation Manifold	Chemically Inert Ultra High Speed Manifold Valve	17
t	LQX12	2-Way & 3-Way Isolation Valve	18
	Value Added	Application-Specific Solutions	22

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3-Way Solenoid Valve



Physical Properties

Valve Type: 3-Way diaphragm Media: Liquids and gases Operating Environment: 40 to 150°F (4 to 66°C) Size: See Dimensions Porting: 1/4-28 Threaded Ports Weight: 2.7 oz Internal Volume: 68 μL The 3 way inert Series 1 valve has been designed for systems where chemical compatibility is most important. The wetted path is isolated from the solenoid, and only PTFE and borosilicate glass are in contact with the media passing through the valve. Low internal volume and fast response time ensure repeatable, accurate volumes. Valves will operate without any pressure or vacuum.

Features

- Provides unsurpassed chemical compatibility for a wide range of media with wetted parts of only PTFE and borosilicate glass.
- 100% continuous duty rating in ambient temperatures up to 66C
- Low power for reduced heat and power consumption
- Fast response times for accurate, repeatable results
- Direct acting does not require pressure or vacuum to operate
- 100% tested tight leak rate provides assurance of a quality seal
- Provides reliable operation for the life of your instrument

Electrical

Power:	Voltage:	Current:	Resistance:
			(Ω+5% @ 70°F)
2.5 Watts	12 VDC	211 ma	57 Ω
4.2 Watts	24 VDC	173 ma	139 Ω
12" Lead Wire	es Standard		

Wetted Materials

Materials Contacting Media: PTFE, Borosilicate Glass Body Options: PTFE, Consult factory for custom options

Performance Characteristics

Operating Pressure: 24" Hg - 20 psi (1.38 BAR) Proof Pressure: 60 psi Response Time: <12 milliseconds cycling Orifice Diameters: 0.060" (1.52 mm) Leak Rate: Bubble Tight Recommended Filtration: 10 µm max

Flow SERIES 1 AIR FLOW



SERIES 1 WATER FLOW (0.060" Orifice)





Dimensions



Ordering Information

		part number	
		001-0017-900	001-0028-900
	Valve Type	3-Way	3-Way
n l	Media	Liquids & Gases	Liquids & Gases
ptic	Operating Pressure	24" Hg - 20 psi	24" Hg - 20 psi
cri	Orifice	0.060"	0.060"
des	Valve Body Material	PTFE	PTFE
tr	Voltage	12 VDC	24 VDC
pê	Porting	1/4 - 28	1/4 - 28
	Operating Environment	50 - 150 deg F	50 - 150 deg F
	Material Contact Media	PTFE	PTFE



PPF-MMV-002/US August 2011



2-Way Solenoid Valve



Physical Properties

Valve Type:
2-Way diaphragm
Media:
Liquids and gases
Operating Environment:
40 to 150°F (4 to 66°C)
Size: See Dimensions
Porting:
1/4-28 Threaded Ports
Weight:
2.5 oz
Internal Volume:
49 µL

The 2 way NC inert Series 2 valve has been designed for systems where chemical compatibility is most important. The wetted path is isolated from the solenoid, and only PTFE is in contact with the media passing through the valve. Low internal volume and fast response time ensure repeatable, accurate volumes. Valves will operate without any pressure or vacuum.

Features

- Provides unsurpassed chemical compatibility for a wide range of media with PTFE wetted parts
- 100% continuous duty rating in ambient temperatures up to 66C
- Low power for reduced heat and power consumption
- Fast response times for accurate, repeatable results
- Direct acting does not require pressure or vacuum to operate
- 100% tested tight leak rate provides assurance of a quality seal
- Provides reliable operation for the life of your instrument

Electrical

Power:	Voltage:	Current:	Resistance:
			(Ω+5% @ 70°F)
2.5 Watts	12 VDC	211 ma	57 Ω
4.2 Watts	24 VDC	173 ma	139 Ω

12" Lead Wires Standard

Wetted Materials

Materials Contacting Media: PTFE, Body Body Options: PTFE, Consult factory for custom options

Performance Characteristics

Operating Pressure: 24"Hg - 20 psi (1.38 BAR) Proof Pressure: 30 psi Response Time: <20 milliseconds cycling Orifice Diameters: 0.060" (1.52 mm) Leak Rate: 1 X 10⁻⁵ cc/sec. HE Recommended Filtration: 10 µm max







6

Dimensions



Ordering Information

-		part number		
		002-0017-900	002-0010-900	
	Valve Type	2-Way NC	2-Way NC	
n	Media	Liquids & Gases	Liquids & Gases	
ptic	Operating Pressure	24" Hg- 20 psi	24" Hg - 20 psi	
cri	Orifice	0.060"	0.060"	
des	Valve Body Material	PTFE	PTFE	
art	Voltage	12 VDC	24 VDC	
p	Porting	1/4 - 28	1/4 - 28	
	Operating Environment	40 - 150 deg F	40 - 150 deg F	
	Material Contact Media	PTFE	PTFE	



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General Purpose Series 3

2-Way and 3-Way Solenoid Valve



Physical Properties

Valve Type:

2-Way Normally Closed, 3-Way

Media:

Liquids and gases

Operating Environment:

40 to 150°F (4 to 66°C) **Size:** See Dimensions

Portina:

Barbs: 1/16", 1/8", 3/16"

Weight:

1.8 to 2.0 oz (Material and Configuration Dependent)

Internal Volume:

238 μL (1/16" Barb Option) 326 μL (1/8" Barb Option) 516 μL (3/16" Barb Option) The Series 3 solenoid valve is suitable for both liquids and gases, including bleach and saline, for applications including clinical chemistry, blood chemistry, and ink jet printing. These 2-way and 3-way valves provide high flow in a small valve with pressures up to 100 PSI, they feature barbs for soft tubing and no metal to metal sliding surfaces, ensuring long, trouble free operation. These valves are an excellent alternative to pinch valves, since there is no pinched tubing to wear out. **Features**

- Wetted parts are engineered plastic (PEEK), stainless steel, PTFE and elastomer (FKM or EPDM)
- Chemically resistant to moderate acids, bases, dilute bleach, saline
- Integral molded and machined barbs for soft tubing eliminate potential leaks at connection
- High flow in small package provides fast cycle times and low pressure losses
- No sliding metal to metal surfaces minimize wear of moving parts
- Direct acting design does not require pressure or vacuum to operate

Performance Characteristics

Wetted Materials

Body Options:

Standard: PEEK

Materials Contacting Media:

Seal Options: FKM, EPDM

PTFE, Stainless Steel, Seal, Body

Operating Pressure:	Orifice Diameters:	Fitting Type:			
24" Hg - 100 psig	0.055" (1.40 mm)	1/16" Barb			
24" Hg - 50 psig	0.078" (1.98 mm)	1/8" Barb			
24" Hg - 20 psig	0.090" (2.29 mm)	3/16" Barb			
Diaphragm Version					
0 - 25 psig	0.078" (1.98 mm)	1/8" Barb			
Leak Rate:	Response Time:				
1 X 10 ⁻⁵ cc/sec. He	<12 milliseconds cycling				
Decomposed ad Filtration: 10 up may Dread Dreadure: 1 EV roted processor					

Recommended Filtration: 10 µm max Proof Pressure: 1.5X rated pressure

Electrical

Power:Voltage:2.5 Watts12 VDC4.2 Watts24 VDC12" Lead Wires Standard







General Purpose Series 3

Dimensions

DIMENSIONS (INCHES)								
	THREE - WAY						TWO - WAY	'
PORTS	Α	В	С	D		Α	В	С
1/16 BARBS	1.86	0.16	0.98	0.17		1.69	0.16	0.98
1/8 BARBS	2.03	0.16	1.02	0.35		1.69	0.16	1.02
3/16 BARBS	2.13	0.16	1.32	0.44		1.69	0.16	1.32



Ordering Information

		part number						
		003-0137-900	003-0218-900	003-0130-900	003-0214-900	003-0096-900	003-0264-900	003-0194-900
	Valve Type	2-Way NC	2-Way NC	3-Way	3-Way	2-Way NC	2-Way NC	3-Way
	Media	Liquids & Gases						
_	Operating Pressure	24" Hg - 100 psi	24" Hg- 100 psi					
Ę	Orifice	0.055"	0.055"	0.055"	0.055"	0.055"	0.055"	0.055"
ip	Valve Body Material	PEEK						
esc	Voltage	12 VDC	12 VDC	12 VDC	12 VDC	24 VDC	24 VDC	24 VDC
đ	Porting	1/16" Barb						
par	Operating Environment	40 - 150 deg F						
	Material Contact Media	PTFE, Stainless						
	Material Contact Media	Steel, Seals, Body						
	Seals	FKM	EPDM	FKM	EPDM	FKM	EPDM	FKM

		part number						
		003-0241-900	003-0141-900	003-0260-900	003-0120-900	003-0356-900	003-0111-900	003-0257-900
	Valve Type	3-Way	2-Way NC	2-Way NC	3-Way	3-Way	2-Way NC	2-Way NC
	Media	Liquids & Gases						
_	Operating Pressure	24" Hg- 100 psi	24" Hg - 50 psi	24" Hg - 50 psi	24" Hg- 50 psi	24" Hg - 50 psi	24" Hg - 50 psi	24" Hg- 50 psi
Ę	Orifice	0.055"	0.078"	0.078"	0.078"	0.078"	0.078"	0.078"
, di	Valve Body Material	PEEK						
esc	Voltage	24 VDC	12 VDC	12 VDC	12 VDC	12 VDC	24 VDC	24 VDC
đ	Porting	1/16" Barb	1/8" Barb	1/8" Barb	1/8" Barb	1/8" Barb	1/8" Barb	1/8" Barb
par	Operating Environment	40 - 150 deg F						
	Material Contact Media	PTFE, Stainless						
	Material contact Media	Steel, Seals, Body						
	Seals	EPDM	FKM	EPDM	FKM	EPDM	FKM	EPDM

		part number			
		003-0165-900	003-0258-900	003-0175-900	003-0189-900
	Valve Type	3-Way	3-Way	2-Way NC	2-Way NC
	Media	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases
_	Operating Pressure	24″ Hg - 50 psi	24" Hg - 50 psi	24" Hg - 20 psi	24" Hg - 20 psi
ţi	Orifice	0.078"	0.078"	0.090"	0.090"
ġ	Valve Body Material	PEEK	PEEK	PEEK	PEEK
sa	Voltage	24 VDC	24 VDC	12 VDC	12 VDC
tq	Porting	1/8" Barb	1/8" Barb	3/16" Barb	3/16" Barb
par	Operating Environment	40 - 150 deg F			
	Material Contact Media	PTFE, Stainless	PTFE, Stainless	PTFE, Stainless	PTFE, Stainless
	Material Contact Media	Steel, Seals, Body	Steel, Seals, Body	Steel, Seals, Body	Steel, Seals, Body
	Seals	EKM	FPDM	EKM	EPDM

part number

		part number					
		003-0328-900	003-0347-900	003-0359-900	003-0376-900	003-0421-900	003-0461-900
	Valve Type	3-Way	3-Way	2-Way NC	2-Way NC	3-Way	3-Way
	Media	Liquids & Gases					
-	Operating Pressure	24" Hg- 20 psi	24" Hg - 20 psi	24" Hg - 20 psi	24" Hg - 20 psi	24" Hg - 20 psi	24" Hg - 20 psi
tio	Orifice	0.090"	0.090"	0.090"	0.090"	0.090"	0.090"
escrip	Valve Body Material	PEEK	PEEK	PEEK	PEEK	PEEK	PEEK
	Voltage	12 VDC	12 VDC	24 VDC	24 VDC	24 VDC	24 VDC
rt d	Porting	3/16" Barb					
pai	Operating Environment	40 - 150 deg F					
	Material Contact Media	PTFE, Stainless					
	Material Contact Media	Steel, Seals, Body					
	Seals	FKM	EPDM	FKM	EPDM	FKM	EPDM

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Extreme Performance Series 9

2-Way and 3-Way Valve



Physical Properties

Valve Type:				
2-Way and 3-Way Configurations				
Media:				
Liquids and gases				
Operating Environment:				
40 to 221°F (4 to 105°C)				
Size: See Dimensions				
Porting:				
1/4-28 Threaded Ports; 1/8" NPT				
(Female); A-Lok compression fittings				
Weight:				
3.1 oz (3-Way, 1/8" NPT Body Option)				
Internal Volume:				
(Contact factory for details)				

Series 9 valves offer outstanding precision control in liquid and gas analysis. Combining high speed and high flow in a small size, this rugged valve operates with extreme repeatability. The valves are constructed of non-corroding, passivated stainless steel. Ideal for analytical analysis equipment.

Features

- Smallest footprint in its class
- High speed response times of less than 5 ms eliminate delays in the system
- 100% tested to leak-tight 1 x 10-7 cc/sec/atm Helium
- Pressures up to 1250 PSI
- Available with a variety of fittings, orifices, seals, and voltages to match your application

Electrical

Power: Voltage:		ver: Voltage: Current:	
			(Ω+5% @ 70°F)
12 Watts	12 VDC	1000 ma	12 Ω
12 Watts	24 VDC	500 ma	48 Ω
12" Lead Wi	res Standard		

Wetted Materials						
Materials Contacting Media:						
PTFE, Stainless Steel, Body, Seals						
Body:						
316L Stainless Steel						
Seals Options:						
FKM & Vespel, FKM						

Performance Characteristics Operating Pressure:

24"Hg - 1250 psig (0.030 in orifice) 24"Hg - 250 psig (0.060 in orifice) 24"Hg - 100 psig (0.116 in orifice) **Orifice Diameters:** 0.030" (0.76 mm), 0.060" (1.52 mm) 0.116" (2.99 mm) Response Time: <5 ms cycling Leak Rate: 1 x 10⁻⁷ cc/sec/atm Helium



SERIES 9 AIR FLOW





Dimensions



.....



TWO-WAY

В

0.66

С

0.33

D

1.63

1.91

Е

0.75

0.75

DIMENSIONS (INCHES)

	THREE-WAY					
PORTS	A B C D E					
1/8 NPT	2.18	0.60	0.30	1.00	0.63	
		TWO-WAY				
PORTS	A B C D E					
1⁄4 - 28	1.64	0.61	0.25	1.00	0.63	
1/8 NPT	1.76	0.60	0.30	1.00	0.63	

Ord

part description

part description

lering Information							
	part number						
	009-0100-900	009-0172-900	009-0272-900	009-0270-900	009-0631-900		
/alve Type	2-Way NC	2-Way NC	2-Way NC	2-Way NC	2-Way NC		
1edia	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases		
perating Pressure	24" Hg - 1250 psi	24" Hg to 1250 psi	24" Hg to 1250 psi	24" Hg to 250 psi	24" Hg to 250 psi		
Prifice	0.030"	0.030"	0.030"	0.060"	0.060"		
alve Body Material	316L Stainless	316L Stainless	316L Stainless	316L Stainless	316L Stainless		
oltage	12 VDC	24 VDC	24 VDC	24 VDC	24 VDC		
orting	1/16" A-Lok	1/16" A-Lok	1/4" - 28	1/8" A-Lok	1/8" FNPT		
perating Environment	40 - 221 deg F	40 - 221 deg F					
faterial Contact Media	PTFE, Stainless Steel, Body, Seals	PTFE, Stainless Steel Body, Seals					
ieals	Vespel, FKM	Vespel, FKM	Vespel, FKM	FKM	FKM		

PORTS

1/16 A-LOK 1/8 A-LOK

THREE-WAY

С

0.33

D

1.91

E

0.75

Α

1.64

1.64

В

Α

2.18 0.66



	part number					
	009-0269-900	091-0094-900	009-0933-900	009-0089-900	009-0207-900	009-0143-900
Valve Type	3-Way	3-Way	3-Way	2-Way NC	3-Way	3-Way
Media	Liquids & Gases					
Operating Pressure	24" Hg to 100 psi					
Orifice	0.060"	0.060"	0.060"	0.116"	0.116"	0.116"
Valve Body Material	316L Stainless					
Voltage	24 VDC	12 VDC	24 VDC	24 VDC	12 VDC	24 VDC
Porting	1/8" A-Lok	1/8" FNPT				
Operating Environment	40 - 221 deg F					
Material Contact Media	PTFE, Stainless Steel, Body, Seals					
Seals	FKM	FKM	FKM	FKM	FKM	FKM

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



11



Extreme Performance Series 99

Ultra Low Leak Extreme Performance Valve



The Series 99 offers ultra-high vacuum valve technology in a reliable, compact design. Using the unique metal Gen-LockTM seal, the Series 99 delivers low leak rates, high speed, and high flow and operates well in both low and high temperature applications. The Vespel poppet option provides a non-elastomer flowpath, eliminating the possibility of elastomer outgassing. Ideal for analytical analysis equipment. **Features**

Smallest footprint in its class

- Standard non-elastomer flow path minimizes outgassing of materials
- High speed response times of less than 5 ms eliminate delays in the system
- 100% tested to leak-tight 1 x 10-8 cc/sec/atm Helium
- Pressures up to 1250 PSI
- Available with a variety of fittings, orifices, seals, and voltages to match your application

Electrical

Power:	Voltage:	Current:	Resistance:
			(Ω+5% @ 70°F)
12 Watts	12 VDC	1000 ma	12 Ω
12 Watts	24 VDC	500 ma	48 Ω
12" Lead Wi	res Standard		

Wetted Materials

Materials Contacting Media:				
PTFE, Stainless Steel, Body, Seals				
Body Options:				
316L Stainless Steel				
Seals Options:				
Vespel & Silver-Plated Nickel,				
FKM & Silver-Plated Nickel Gasket				

Performance Characteristics

Operating Pressure:				
24"Hg - 1250 psig (0.030 in orifice)				
24"Hg - 250 psig (0.060 in orifice)				
24"Hg - 100 psig (0.116 in orifice)				
Orifice Diameters:				
0.030" (0.76 mm)				
0.000 (1.52 mm),0.110 (2.99 mm)				
Response Time: <5 ms cycling				
Leak Rate:				
1 x 10 ⁻⁸ cc/sec/atm Helium				

Flow **SERIES 99 AIR FLOW** 120 0 116" Orifice 0.060" Orifice 100 Flow (LPM) 60 40 20 20 30 40 50 60 70 80 90 100 Pressure (PSI)

Series 99 AIR FLOW



12

Physical Properties

Valve Type:
2-Way and 3-Way Configurations
Media:
Liquids and gases
Operating Environment:
40 to 221°F (4 to 105°C)
Size: See Dimensions
Porting:
Vacuum fittings;
A-Lok compression fittings
Weight:
3.1 oz (3-Way, 1/8" Body Option)
Internal Volume:
(Contact factory for details)

Extreme Performance Series 99



Ordering Information

		part number				
		099-0051-900	099-0340-900	099-0080-900	099-0135-900	099-0075-900
	Valve Type	2-Way NC	2-Way NC	2-Way NC	3-Way	3-Way
	Media	Liquids & Gases				
	Operating Pressure	24" Hg to 1250 psi	24" Hg to 1250 psi	24" Hg to 250 psi	24" Hg to 100 psi	24" Hg to 100 psi
c	Orifice	0.030"	0.030"	0.060"	0.060"	0.060"
tio	Valve Body Material	316L Stainless				
crip	Voltage	12 VDC	24 VDC	24 VDC	24 VDC	12 VDC
t desc	Porting	1/16" A-Lok	1/16" A-Lok	1/8" A-Lok	1/8" A-Lok	1/8" A-Lok
par	Operating Environment	40 - 221 deg F				
	Material Contact Media	PTFE, Stainless Steel, Body, Seals				
	Seals	Vespel and Gasket	Vespel and Gasket	FKM and Gasket	FKM and Gasket	FKM and Gasket
	Gasket	Silver Plated Nickel				

		part number	
		099-0167-900	099-0107-900
	Valve Type	2-Way NC	3-Way
	Media	Liquids & Gases	Liquids & Gases
	Operating Pressure	24" Hg to 100 psi	24" Hg to 100 psi
۲	Orifice	0.116"	0.116"
tio	Valve Body Material	316L Stainless	316L Stainless
t descrip	Voltage	24 VDC	24 VDC
	Porting	1/4" Female VacuSeal	1/4" Female VacuSeal
par	Operating Environment	40 - 221 deg F	40 - 221 deg F
	Material Contact Media	PTFE, Stainless Steel, Body, Seals	PTFE, Stainless Steel, Body, Seals
	Seals	FKM and Gasket	FKM and Gasket
	Gasket	Silver Plated Nickel	Silver Plated Nickel



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Pulse Valves Series 9

Ultra Low Leak Extreme Performance Valve



Pulse Valves are available in flange mount, axial flow, and 2-Way Normally Closed versions. Constructed of corrosion resistant materials, these field-proven units provide extreme repeatability and operate as fast as 160 microseconds. They are capable of operating at pressures up to 85 atmospheres and speeds of 120 Hz. Supersonic gas pulses can be delivered with "First Shot" accuracy.

Features

- Performs at ultra-high speed as fast as 160 microseconds
- Delivers repeatable pulses and high repetition rates for small volume gas control
- Direct acting design requires no pressure or vacuum to operate
- Built with robust stainless steel construction
- Rated for continuous duty at room temperature

Physical Properties

Valve Type: Flange Mount, Axial Flow, 2-Way Normally Closed version Media: Liquids and gases Operating Environment: 4 to 105°C (40 to 221°F) Size: Configuration and fitting dependent (*Contact factory for details*) Weight:

2.8 oz (9-181-900)

Porting:

A-Lok,

Internal Volume: (Contact factory for details)

Electrical

Power:	Voltage:	Current:	Resistance:
			(Ω+5% @ 70°F)
12 Watts	20 VDC	594 ma	33 Ω
11.2 Watts	28 VDC	400 ma	70 Ω
12" Lead Wire	es Standard		

Wetted Materials

Poppet Materials: Series 9 PTFE, PEEK, PCTFE, PI (Vespel®*), CTFE (Kel-F®*) Two spare poppets ship with valve assembly O-Ring:

Series 9 FFKM (Kalrez®*) *NOTE: Vespel and Kalrez are trademarks of Dupont. Kel-F is a trademark of 3M Company.

Performance Characteristics

Operating Pressure:
Vacuum -1250 psig
(0.004", 0.020", 0.031" orifice)
Vacuum - 750 psig (0.039" orifice)
Orifice Diameters:
0.004" (0.10 mm) 0.020" (0.51 mm
0.031" (0.79 mm) 0.039" (1.00 mm
Response Time:
160 uS to < 5ms
Leak Rate:
1 x 10 ⁻⁷ cc/sec/atm Helium



Pulse Valves Series 9

Dimensions



Ordering Information

	part number						
	009-1668-900	009-0582-900	009-0381-900	009-1669-900	009-0442-900	009-0181-900	009-1670-900
Valve Type	2-Way NC	2-Way NC	2-Way NC	2-Way NC	2-Way NC	2-Way NC	2-Way NC
Media	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases
Operating Pressure	Vacuum - 1250 psi	Vacuum - 1250 psi	Vacuum - 1250 psi	Vacuum - 750 psi	Vacuum - 1250 psi	Vacuum - 1250 psi	Vacuum - 1250 psi
Orifice	0.004"	0.020"	0.031"	0.039"	0.020"	0.031"	0.004"
Inlet Porting	1/4" A-LOK	1/4" A-LOK	1/4" A-LOK	1/4" A-LOK	1/4" A-LOK	1/4" A-LOK	1/4" A-LOK
Voltage	28 VDC	28 VDC	28 VDC	28 VDC	28 VDC	28 VDC	20 VDC
Outlet Porting	Flang, No Cone	Flange, No Cone	Flange, No Cone	Flange, No Cone	Flange, Exit Cone	Flange, Exit Cone	Fange, No Cone
Operating Environment	40 - 221 deg F	40 - 221 deg F	40 - 221 deg F	40 - 150 deg F	40 - 221 deg F	40 - 221 deg F	40 - 221 deg F
	PTFE, Stainless	PTFE, Stainless	PTFE, Stainless	PTFE, Stainless	PTFE, Stainless	PTFE, Stainless	Vespel, Stainless
Material Contact Media	Steel, Seals	Steel, Seals	Steel, Seals	Steel, Seals	Steel, Seals	Steel, Seals	Steel, Seals
Seals	PTFE, FFKM	PTFE, FFKM	PTFE, FFKM	PTFE, FFKM	PTFE, FFKM	PTFE, FFKM	Vespel, FFKM
	part number						

	009-1421-900	009-1671-900	009-1643-900	009-0347-900	009-0279-900
Valve Type	2-Way NC				
Media	Liquids & Gases				
Operating Pressure	Vacuum - 1250 psi	Vacuum - 1250 psi	Vacuum - 750 psi	Vacuum - 1250 psi	Vacuum - 1250 psi
Orifice	0.020"	0.031"	0.039"	0.020"	0.031"
Inlet Porting	1/4" A-LOK				
Voltage	20 VDC				
Outlet Porting	Flange, No Cone	Flange, No Cone	Flange, No Cone	Flange, Exit Cone	Flange, Exit Cone
Operating Environment	40 - 221 deg F				
	Vespel, Stainless				
Material Contact Media	Steel, Seals				
Seals	Vespel, FFKM				

PPF-MMV-002/US August 2011



Isolation Manifold Series 18

Chemically Inert Manifold Valve



The Series 18 is designed for compact installation in multi-liquid or gas control systems. Available with multiple inlets and one outlet (or vice versa), the Series 18 features all wetted parts of Teflon®. Tubing and connections between discrete valves are eliminated and dead volume is reduced. Repeatability and high speed of opening and closing make the Series 18 ideally suited for controlling small percentages of low flow liquids and gases.

Features

- Low power
- Low internal volume
- High cycle lfe
- High Speed
- Requires no pressure to operate

Physical Properties

2-Way Teflon® valve

Liquids and gases

Operating Environment:

(Contact factory for details)

(Contact factory for details)

(Contact factory for details)

1/4-28 Threaded ports Internal Volume:

Configuration and fitting dependent

4 to 66°C (40 to 150°F)

Valve Type:

Media:

Size:

Weight:

Porting:

Electrical

Power:	Voltage:	Current:	Resistance:
			(Ω+5% @ 70°F)
2.5 Watts	12 VDC	211 ma	57 Ω
4.2 Watts	24 VDC	173 ma	139 Ω

12" 26 AWG Teflon insulated Lead Wires Standard

Wetted Materials

Materials Contacting Media:
Teflon®
Seals:
Teflon®

Recommended filtration level is 10 microns

Performance Characteristics

Operating Pressure:
24"Hg - 20 psig (1.38 BAR)
Orifice Diameters:
0.031" (0.8 mm)
0.062" (1.6 mm)
Response Time:
12 ms maximum
Leak Rate:
Bubble Tight

Ordering Information:

	018-0048-900	018-0074-900
Valve Type	2-Way NC, 4 Station	2-Way NC, 4 Station
Media	Liquids & Gases	Liquids & Gases
Operating Pressure	Vacuum - 20 psi	Vacuum - 20 psi
Orifice	0.060"	0.060"
Valve Body Material	PTFE	PTFE
Voltage	24 VDC	12 VDC
Porting	1/4 - 28	1/4 - 28
Operating Environment	40 - 150 deg F	40 - 150 deg F
Material Contact Media	PTFE	PTFE
Seals	PTFE	PTFE

part number



Two and three position manifolmodels available upon request

PPF-MMV-002/US August 2011



Isolation Manifold Series 27

Chemically Inert Ultra Speed Manifold Valve



Series 27 valves combine the high speed and small size of the Series 9 valves with the chemical inertness of the Series 18 (the media contacts only PTFE or PEEK). Available on 2,3,4, and 6 solenoid manifolds. Series 27 valves offer a variety of styles and constructions, including an inline manifold and Fast-Washout™ design

Features

- Provides a compact package to met a range of operating needs
- Offers low internal volume and high cycle life
- Constructed of PTFE wetted parts
- Performs at ultra high speeds
- Requires no pressure to operate

Physical Properties

Valve Type:
Valve Manifold
Media:
Liquids and gases
Operating Environment:
4 to 66°C (40 to 150°F)
Size:
Configuration and fitting depender
(Contact factory for details)
Weight:
14.0 oz (6 Posotion, PTFE Body)
Porting:
1/4-28 Threaded ports
1/4-28 Threaded ports Internal Volume:
1/4-28 Threaded ports Internal Volume: 104 μL (2 Solenoid, 1/4-28,
1/4-28 Threaded ports Internal Volume: 104 μL (2 Solenoid, 1/4-28, 0.31/0.043" Option)
1/4-28 Threaded ports Internal Volume: 104 μL (2 Solenoid, 1/4-28, 0.31/0.043" Option)

Electrical

Power:	Voltage:	Current:	Resistance:
			(Ω+5% @ 70°F)
5.3 Watts	12 VDC	411 ma	27 Ω
7.0 Watts	24 VDC	292 ma	82 Ω
12"24 AWG Teflon insulated Lead Wires Standard			

Wetted Materials

Materials Contacting Media:		
PTFE, Body		
Body Options:		
PTFE, 316L Stainless Steel, PEEK		
Seals:		
Teflon®		

Performance Characteristics

Operating Pressure:
Vacuum - 20 psig (1.38 BAR)
Orifice Diameters:
0.030" (0.76 mm)
0.062" (1.6 mm)
Response Time:
8 ms maximum
Leak Rate:
Bubble Tight

PPF-MMV-002/US August 2011

Recommended filtration level is

10 microns



Manifold Mount Isolation LQX12

2-Way and 3-Way Solenoid Valve



Typical Applications:

- Direct acting
- Flow control

Physical Properties

Valve Type: 3-Way Universal 2-Way Normally Closed Media: Liquids and Gases **Operating Environment:** 0 to 50°C (32 to 122°F) **Storage Temperature:** -40 to 70°C (-40 to 158°F) Length: 1.16" (29.46 mm) Width: .47" (11.94 mm) Height: 1.57" (39.88 mm) **Porting:** Manifold mount with gasket **Manifold Options:** Face seal, 1/4-28 sub-base Weight: 0.86 oz (24.66 grams) **Internal Volume:** 32 µL (to manifold interface)

LQX12 is a high performance 2-way and 3-way isolated diaphragm valve. Designed to be highly flexible, the 12mm wide design allows easy manifold mounting. Multiple options for elastomers, voltages, and electrical connections ensure the right valve is available for your application. Ideal for analytical, diagnostic, and lifescience applications where reliability is critical in a small package.

Features

- EPDM or FFKM elastomers for particulate tolerance and reliability in a wide range of liquid and gas media
- Valves are 100% tested to ensure a tight seal and consistent performance
- Reduced system size with efficient packaging and 12 mm width
- Designed to be manifold mounted side by side
- Low internal unswept volume for minimal carryover or cross-contamination
- Secure electrical termination to standard female connectors with friction locked (latching) electrical connection
- Optional ¼-28 ported sub-base for stand alone operation or testing
- RoHS compliant. 🗸

Electrical

Power: 2.0 Watts max.

Voltage: 12 and 24 VDC + 5.0% (Other options available)

Electrical Connections:

2.54 mm pitch male pins Friction-locked design receives standard female connector *Options:* 18" leaded assembly, splash guard for wet environment

Wetted Materials

Elastomer: EPDM or FFKM (perfluoroelastomer)

Body/Manifold

PEEK (polyetheretherketone)

Performance Characteristics

Operating Pressure: Vacuum - 50 psig Orifice Diameters: 0.040" (1.02mm) Response Time: 20 ms maximum Leak Rate: Bubble Tight





Manifold Mount Isolation LQX12

Flow



Dimensions



Manifold Interface





Manifold Mount Isolation LQX12





1/4-28 Manifold Sub-Base





Ordering Information

Sample Part ID	LQX12	3W	12	FF	FS	_	001
Description	Series	Configuration	Voltage	Seal/Gasket	Mounting Style	-	Custom Accessories
Options		2W: 2-Way, Normally Closed 3W: 3-Way	12: 12 VDC 24: 24 VDC	FF: FFKM EP: EPDM	FS: Face Seal 48: 1/4-28 Ports		000: Standard Product 001: Flying Leads, 18"
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PPF-MMV-002/US August 2011



NOTES

21



Value Added Application-Specific Solutions

Gassing Control System



Mixed gassing logic design includes VSO® proportional valves, X-Valve®, pressure switch, pressure sensors, and PCB interface

Vacuum Gas Control Module



- Tested to 1 x 10⁻⁷ cc/sec/atm Helium
- Assembly tested on mass spectrometer

6 Position VSO[®] Proportional Valve Pneumatic Manifold Assembly

Pneumatic Module



Quick connect fittings

• Integrated valve manifold

• Compact design

• Single electrical

 Valves configured per specifications

connection

Circuit board with mass electrical termination

Magnum Manifold Assembly



- with single connection
- Compact designEasily adaptable
- 2 way and 3 way designs

8 Position SRS Model Pneumatic Manifold



- Integrated circuit board mounting
- Mass electrical termination

10 Position X-Valve® Pneumatic Manifold



- Mixed pneumatic logic design
- Ultra-miniature design with PCB for mass termination

10 Position SRS Model Pneumatic Manifold



- Circuit board with transducers
- Pressed in barbed fittings





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