

# 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

<b>Valve Type:</b>
Flange Mount, Axial Flow, 2-Way Normally Closed version
<b>Media:</b>
Liquids and gases
<b>Operating Environment:</b>
4 to 105°C (40 to 221°F)
<b>Size:</b>
Configuration and fitting dependent (Contact factory for details)
<b>Weight:</b>
2.8 oz (9-181-900)
<b>Porting:</b>
A-Lok, VacuSeal
<b>Internal Volume:</b>
(Contact factory for details)

### Electrical

Power:	Voltage:	Current:	Resistance:
			( $\Omega$ +5% @ 70°F)
12 Watts	20 VDC	594 ma	33 $\Omega$
11.2 Watts	28 VDC	400 ma	70 $\Omega$
<b>12" Lead Wires Standard</b>			

### Wetted Materials

<b>Poppet Materials:</b>
Series 9 PTFE, PI (VespeI®*) <i>Two spare poppets ship with valve assembly</i>
<b>O-Ring:</b>
Series 9 FFKM (Kalrez®*)
<small>*NOTE: VespeI and Kalrez are trademarks of Dupont. Kel-F is a trademark of 3M Company.</small>

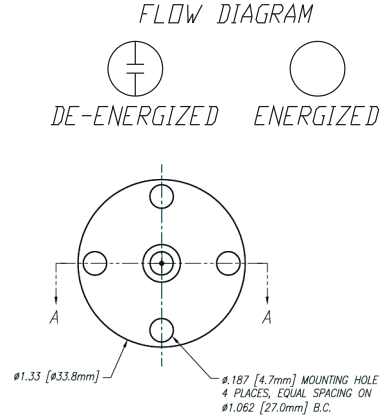
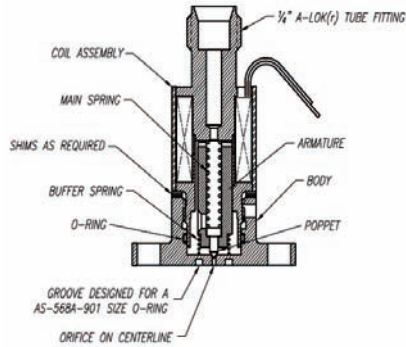
### Performance Characteristics

<b>Operating Pressure:</b>
24"Hg -1250 psig (0.004", 0.020", 0.031" orifice) 24"Hg - 750 psig (0.039" orifice)
<b>Orifice Diameters:</b>
0.004" (0.10 mm) 0.020" (0.51 mm) 0.031" (0.79 mm) 0.039" (1.00 mm)
<b>Response Time:</b>
160 ms to < 5ms
<b>Leak Rate:</b>
1 x 10 <sup>-7</sup> cc/sec/atm Helium

# Pulse Valves Series 9

## Dimensions

Series 9



## 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
<b>Valve Type</b>	2-Way NC	2-Way NC	2-Way NC	2-Way NC	2-Way NC	2-Way NC	2-Way NC
<b>Media</b>	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases
<b>Operating Pressure</b>	Vacuum - 1250 psi	Vacuum - 1250 psi	Vacuum - 1250 psi	Vacuum - 750 psi	Vacuum - 1250 psi	Vacuum - 1250 psi	Vacuum - 1250 psi
<b>Orifice</b>	0.004"	0.020"	0.031"	0.039"	0.020"	0.031"	0.004"
<b>Inlet Porting</b>	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
<b>Voltage</b>	28 VDC	28 VDC	28 VDC	28 VDC	28 VDC	28 VDC	20 VDC
<b>Outlet Porting</b>	Flang, No Cone	Flange, No Cone	Flange, No Cone	Flange, No Cone	Flange, Exit Cone	Flange, Exit Cone	Flange, No Cone
<b>Operating Environment</b>	40 - 150 deg F	40 - 150 deg F	40 - 150 deg F	40 - 150 deg F	40 - 150 deg F	40 - 150 deg F	40 - 150 deg F
<b>Material Contact Media</b>	PTFE, Stainless Steel, Seals	PTFE, Stainless Steel, Seals	PTFE, Stainless Steel, Seals	PTFE, Stainless Steel, Seals	PTFE, Stainless Steel, Seals	PTFE, Stainless Steel, Seals	Vespel, Stainless Steel, Seals
<b>Seals</b>	PTFE, FFKM	PTFE, FFKM	PTFE, FFKM	PTFE, FFKM	PTFE, FFKM	PTFE, FFKM	Vespel, FFKM

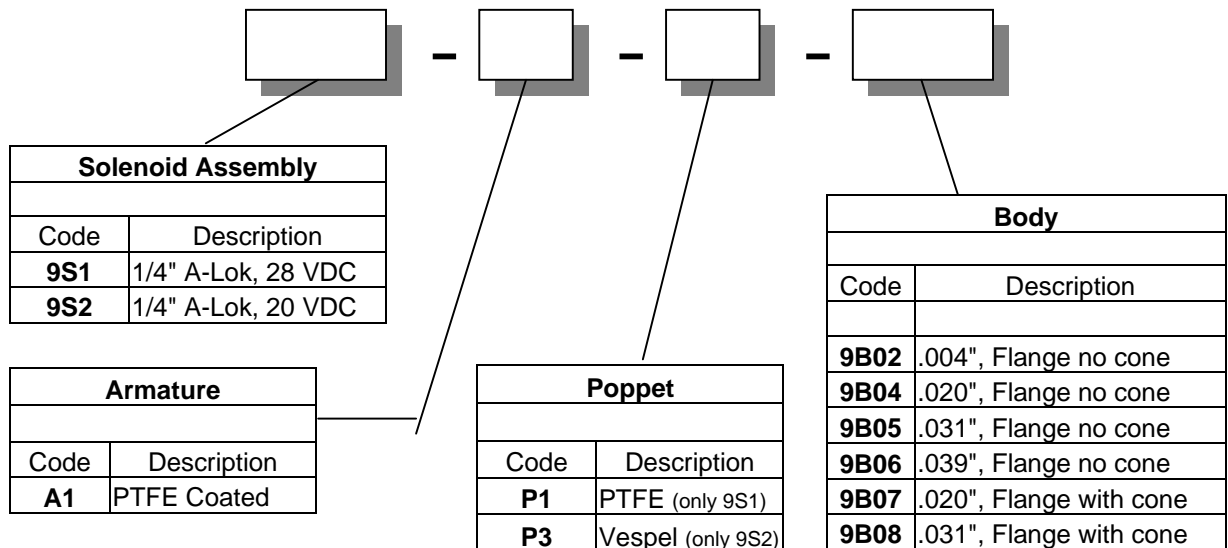
	part number				
	009-1421-900	009-1671-900	009-1643-900	009-0347-900	009-0279-900
<b>Valve Type</b>	2-Way NC	2-Way NC	2-Way NC	2-Way NC	2-Way NC
<b>Media</b>	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases	Liquids & Gases
<b>Operating Pressure</b>	Vacuum - 1250 psi	Vacuum - 1250 psi	Vacuum - 750 psi	Vacuum - 1250 psi	Vacuum - 1250 psi
<b>Orifice</b>	0.020"	0.031"	0.039"	0.020"	0.031"
<b>Inlet Porting</b>	1/4" A-LOK	1/4" A-LOK	1/4" A-LOK	1/4" A-LOK	1/4" A-LOK
<b>Voltage</b>	20 VDC	20 VDC	20 VDC	20 VDC	20 VDC
<b>Outlet Porting</b>	Flange, No Cone	Flange, No Cone	Flange, No Cone	Flange, No Cone	Flange, No Cone
<b>Operating Environment</b>	40 - 150 deg F	40 - 150 deg F	40 - 150 deg F	40 - 150 deg F	40 - 150 deg F
<b>Material Contact Media</b>	Vespel, Stainless Steel, Seals	Vespel, Stainless Steel, Seals	Vespel, Stainless Steel, Seals	Vespel, Stainless Steel, Seals	Vespel, Stainless Steel, Seals
<b>Seals</b>	Vespel, FFKM	Vespel, FFKM	Vespel, FFKM	Vespel, FFKM	Vespel, FFKM

PPF-MMV-002/US Sept 2009

For more information call 1.800.525.2857 or email [ppfinfo@parker.com](mailto:ppfinfo@parker.com)  
 Visit [www.parker.com/precisionfluidics](http://www.parker.com/precisionfluidics)



TITLE: <b>Pulse Valve Series 9 Scheme Sheet</b>	DOCUMENT # <b>PV9-Scheme-001</b>	REV A	Page 1 of 1
PARKER HANNIFIN CORPORATION GENERAL VALVE OPERATION	CREATED BY: Greg Barbrack	DATE:	10/12/2006
	REVISED BY: Aman Sharafi	DATE:	1/18/2010
	CHECKED BY:	DATE:	
	APPROVED BY:	DATE:	



Scheme Number	Part Number	Description
9S1-A1-P1-9B02	009-1668-900	1/4" A-Lok, 28 VDC, PTFE, .004", Flange no cone
9S1-A1-P1-9B04	009-0582-900	1/4" A-Lok, 28 VDC, PTFE, .020", Flange no cone
9S1-A1-P1-9B05	009-0381-900	1/4" A-Lok, 28 VDC, PTFE, .031", Flange no cone
9S1-A1-P1-9B06	009-1669-900	1/4" A-Lok, 28 VDC, PTFE, .038", Flange no cone
9S1-A1-P1-9B07	009-0442-900	1/4" A-Lok, 28 VDC, PTFE, .020", Flange with cone
9S1-A1-P1-9B08	009-0181-900	1/4" A-Lok, 28 VDC, PTFE, .031", Flange with cone
9S2-A1-P3-9B02	009-1670-900	1/4" A-Lok, 20 VDC, Vespel, .004", Flange no cone
9S2-A1-P3-9B04	009-1421-900	1/4" A-Lok, 20 VDC, Vespel, .020", Flange no cone
9S2-A1-P3-9B05	009-1671-900	1/4" A-Lok, 20 VDC, Vespel, .031", Flange no cone
9S2-A1-P3-9B06	009-1643-900	1/4" A-Lok, 20 VDC, Vespel, .039", Flange no cone
9S2-A1-P3-9B07	009-0347-900	1/4" A-Lok, 20 VDC, Vespel, .020", Flange with cone
9S2-A1-P3-9B08	003-0279-900	1/4" A-Lok, 20 VDC, Vespel, .031", Flange with cone