



# Low Flow Air Pilot Valve

3-Way, Direct-Acting, Solenoid  
Model: V70900-98



## DESCRIPTION

Valcor Nuclear has created this compact size and low weight 3-way, direct-acting, nuclear-qualified solenoid valve, to be used primarily as an air pilot control valve in nuclear power plants. It has been designed specifically to prevent the chronic operational problems associated with conventional solenoid valves currently installed in many PWR, BWR and CANDU plants.

Valcor Model V70900-98 is ideal for use in a host of safety-related, low flow solenoid valve applications.

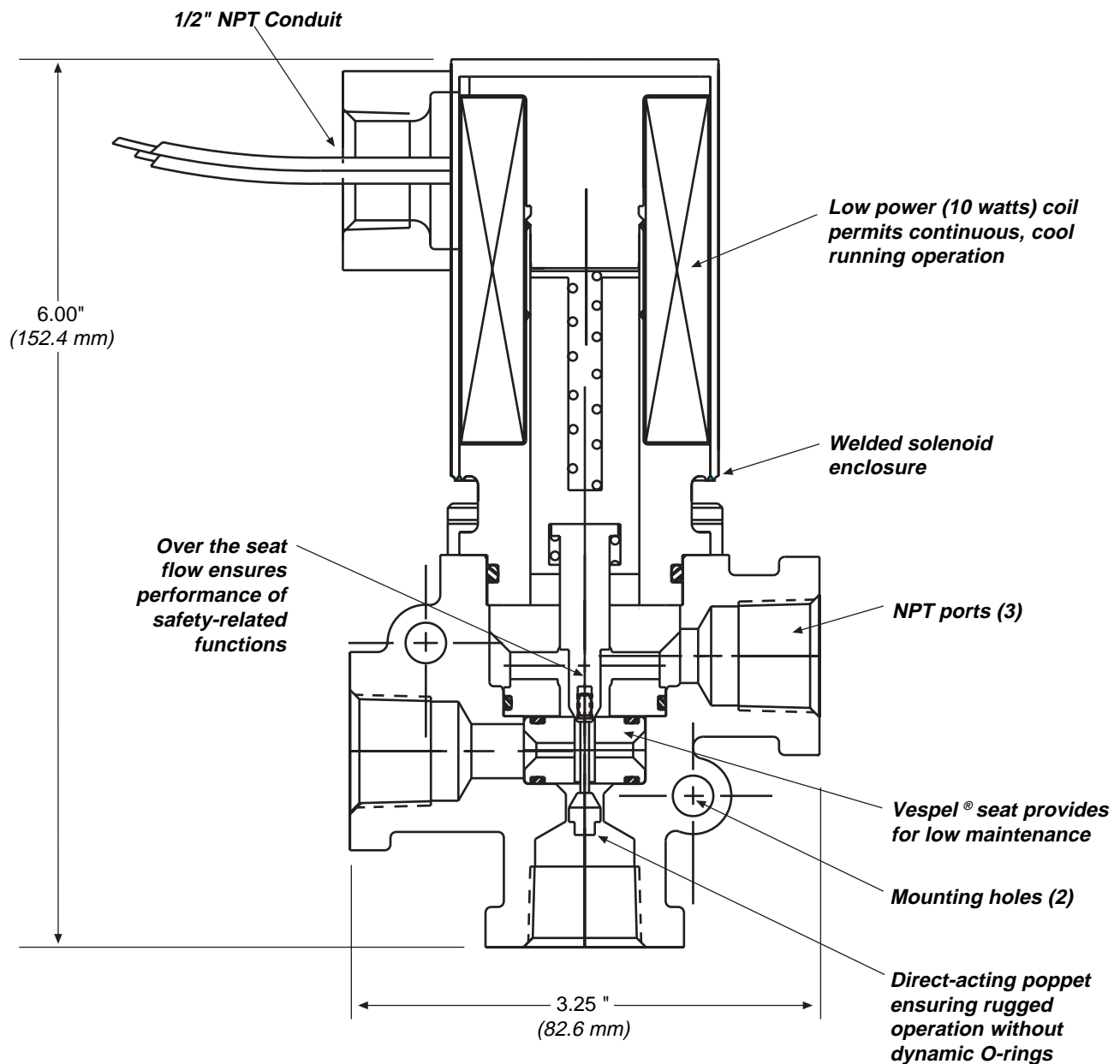
Its principal function is pressurizing and venting pneumatic diaphragm actuator or air cylinders under extremely harsh environmental conditions.

Its cool running, single coil design is both highly reliable and adaptable, offering significant improvements for a variety of applications. The versatility of Valcor's V70900-98 valve allows for a variety of configurations, including 2-way (*one port plugged*), *normally closed*, *normally open* and *universal* modes, with AC or DC voltages. No minimum operating pressure differential is required in any mode.

## THE V70900-98 INCORPORATES THESE OUTSTANDING FEATURES

- Compact size and low weight
- Rugged construction
- Direct-acting, *with no diaphragm or dynamic O-ring seals* (O-rings are used for static seals only)
- 1/4" NPT is standard; also available in 1/8", 3/8" and 1/2" line size
- Universal operation - normally open, normally closed, selector or diverter modes feasible with same design
- Internal flow path sealing by stainless steel poppets on Vespel® polyimide seats
- Brass is standard; also available in aluminium or stainless steel
- Mounting brackets available as an option
- Solenoid enclosure is all stainless steel, seal welded construction for NEMA-4,-7 compliance (*Water tight and explosion proof*)
- Class H Insulation
- Powered with 48 VDC; 120 VAC/125 VDC, or other voltage options also available
- Requires less than 10 watts of power; cool running/potted coil design
- Can be mounted in any attitude
- Maintenance-free. Coil replacement in the field can be made without disturbing in-line piping
- Designed for continuous duty up to 150°F (66°C) ambient. Higher temperature versions available
- Qualified life - 40 years for coil & 10 years for O-rings
- Qualified to IEEE standards 323, 344 and 382 for inside containment

**OUTLINE DIMENSIONS  
MODEL V70900-98**



**TYPICAL SPECIFICATIONS**

Fluid: ..... Air/Inert Gas  
 Size: ..... 1/4" NPT  
 Operating Pressure: ..... 0-150 psig (10.3 bar)  
 Operating Temperature: ..... 150°F (66°C)  
 Flow, C<sub>v</sub>: ..... 0.2  
 Leakage, per MSS-SP-61: ..... 25 sccm @ 150 psig (10.3 bar)  
 (Bubble tight at factory)  
 Voltage: ..... 98-136 VAC/90-140 VDC/ 48 VDC  
 Power ..... 10 Watts  
 Response Time: ..... 30 m-sec  
 Weight: ..... 4.5lb (2.0kg) for brass



**Valcor Nuclear**

**Valcor Engineering Corporation®**

2 Lawrence Road • Springfield, New Jersey 07081  
 973-467-8400 • Fax: 973-467-8382  
 E-mail: nuclear@valcor.com • http://www.valcor.com