GENERANT

PNEUMATICALLY ACTUATED HIGH PRESSURE GAS CONTROL VALVE
NPT Female x Female, NPSM Male RH & LH, O'Ring Seal Union
Vacuum (29 inHg) – 5500 Psig (380 Bar)

MVA SERIES

Description

The Series MVA Pneumatically Actuated High Pressure Gas Control Valve is optimized for the demanding requirements of Automated Gas Cylinder Fill Plants, Manifold, and Piping System applications. The High Pressure Oxygen Service Valve Configuration (Seal Option C) was third party tested per ISO 7291 (O2 Surge) and ASTM G175 (Promoted Ignition). The valve is also available with a PCTFE seal (Seal Option K) for positive sealing in non-oxygen applications. Series MVA valves can be specified Normally Open (-NO) or Normally Closed (-NC) and are available in a variety of porting configurations. Normally closed version seals bubble-tight up to an inlet pressure of 5500 PSI with only 85 PSI required to open valve to full orifice.

Features

- **OXYGEN SAFE**: Copper Valve (Seal Option C) Configuration Third Party Tested per ISO 7291 (O2 Surge) and ASTM G175 (Promoted Ignition)
- **LOW ACTUATION PRESSURE**: 85 PSI Required to Actuate Valve
- **FLOW CONTROL**: Unique Valve Geometry Allows User to Meter Flow on Initial Opening and Minimizes Initial Pressure Surges
- **LONG SERVICE LIFE**: Extensive Life Cycle Testing Performed to Ensure Reliable Performance
- **HIGH FLOW**: Large Orifices and Internal Flow Paths for Maximum Flow Efficiency
- **FIELD RE-BUILDABLE**: All Seat / Seal Configurations Fully Field Re-Buildable

Technical Data

- Valve Operating Pressure: Vacuum to 5500 Psig (380 Bar) @ 70°F (MAWP Rating per ASME BPVC Section VIII Division 1)
  Note: Valves with NPSM Connections (1" - 11.5 NPSM) are de-rated to 3500 Psig (242 bar) due to the connection's maximum pressure rating.
- Cylinder Operating Pressure: 85-125 PSIG
- Operating Temperature Range: -40° to 165°F (-40° to 74°C)
- Flow Coefficient: C_V is 2.5 for all valve configurations
- Valves are 100% Factory Tested for Internal and External Leakage
  No bubbles visible for 10 seconds with N2 gas at 2500 PSI.



MVA - NC



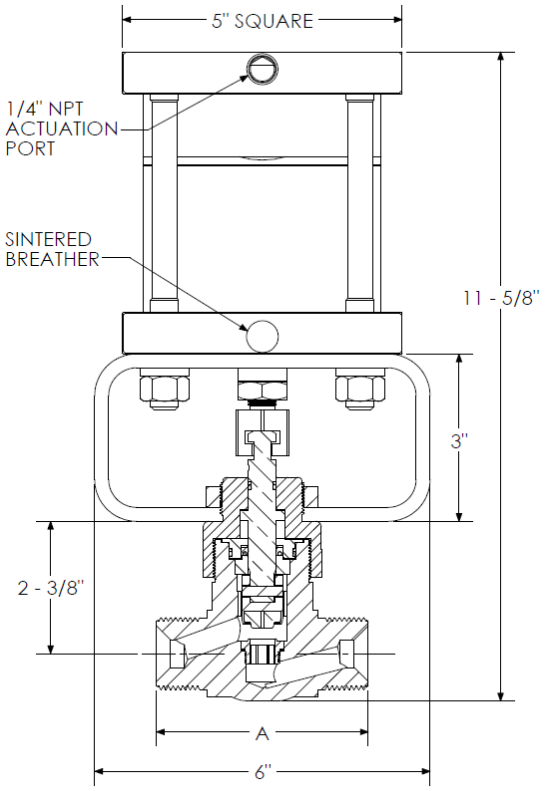
MVA - NO

Materials of Construction

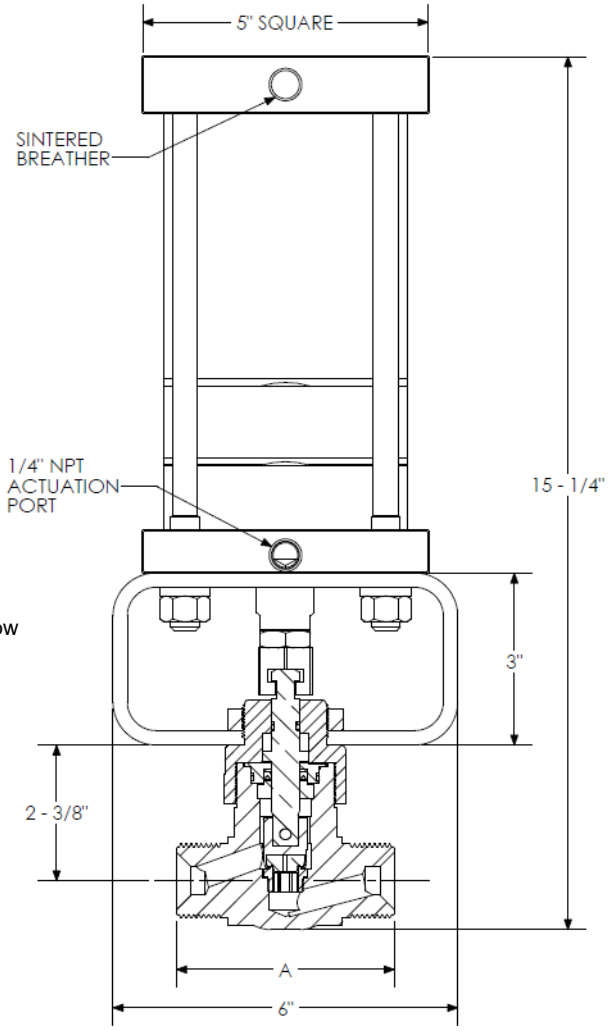
Component	Material	
	Copper Seat	PCTFE Seat
Body	CW617N Forged Brass, EN 12420	
Bonnet, Poppet, Panel Nut, Inner Bonnet, Washer	Brass, ASTM B16	
Valve Adapter (Non-Wetted)	303 SS, ASTM A582	
Stem Seal	FKM	Molythane
Poppet Insert (Seal)	Copper, ASTM B152	PCTFE, ASTM D1430
Replaceable Seat and Stem	Monel® 400	303 SS
O'Rings (2)	FKM	
Replaceable Seat Crush Washer	Copper, ASTM B152	
Seal Washer, Backup Rings (2)	PTFE, ASTM D1710	
Mounting Bracket	A500 Structural Steel, Zinc Plated	
Valve Actuator	Anodized Aluminum, Stainless Steel, Nitrile Seals	
Mounting Nuts and Washers	Zinc Plated Steel	

Valve is lubricated with Dupont Krytox®.
Monel® is a registered trademark of Special Metals Corporation.

PNEUMATICALLY ACTUATED HIGH PRESSURE GAS CONTROL VALVE



Model MVA - NO



Direction of Flow

Model MVA - NC

Dimensional Data

MODEL CODE	PORT CONFIGURATION	Dimensions: inches (mm)	
		Valve Orifice	Dim A
MVA-4F	1/2" NPT Female	0.406 (10.3)	3.25 (82.5)
MVA-6F	3/4" NPT Female		
MVA-8NR	1" 11.5 NPSM Right Hand		3.80 (96.5)
MVA-8NL	1" 11.5 NPSM Left Hand		
MVA-2FS	1-3/8"-12 O'Ring Seal Union		

Notes: Dimensions are in inches (millimeters), for reference only and subject to change. Restrictions in inlet or outlet piping may reduce flow. NPT Threads per ASME B1.20.1.

CAUTION: Valve Actuators are Spring Loaded Devices and are extremely dangerous if improperly disassembled.

How To Order

MVA - 8NR - C - NC

SERIES
MVA - Pneumatically Actuated High Pressure Gas Control Valve

PORT SIZE AND CONFIGURATION
4F - ½" NPT Female Ports
6F - ¾" NPT Female Ports
8NR - 1" - 11.5 NPSM Right Hand Ports
8NL - 1" - 11.5 NPSM Left Hand Ports
2FS - 1-3/8"-12 O'Ring Seal Union*
*-Compatible with Soft-Seal™, O-Seal™, Tech-O-Seal™

ACTUATOR OPTION
NC - Normally Closed
NO - Normally Open

MATERIAL CODE
C - Copper (Cleaned for O_2 Service, Standard)
K - PCTFE

Generant does not recommend the use of PCTFE Material Code in Oxygen Service.

Repair Kits

Seal Material	Specify	Kit Includes
Copper (Cleaned for O_2 Service, Standard)	MVA-C	Copper Poppet Assembly, Poppet Pin, Replaceable Seat Insert, Replaceable Crush Washer, U-Cup Stem Seal, Teflon Backup Washer, O'rings (2) and Teflon Backup Rings(2)
PCTFE	MVA-K	PCTFE Poppet Assembly, Poppet Pin, Replaceable Seat Insert, Replaceable Crush Washer, U-Cup Stem Seal, Teflon Backup Washer, O'rings (2) and Teflon Backup Rings(2)

PROPER COMPONENT SELECTION – When specifying a component, the total system design must be considered to ensure safe and trouble-free performance. Intended component function, materials compatibility, pressure ratings, installation, environment and maintenance are the responsibility of the system designer.

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