

SHORT FORM CATALOGUE

SYSTEM BUILDING BLOCKS

In order to build and assemble high performance analytical systems that include sampling stream selection and column switching, high performance hardware is required e.g. tubing, fitting, and various valves.

1.0 GC DIAPHRAGM VALVE

The GC diaphragm valve family is available with multiple configurations to answer to your specific needs. We offer different valve head materials such as SS-316L, Hastelloy, Monel, PEEK, PTFE and more. We also offer coatings like SilcoNert 2000® and Dursan®. Our valves are rated from 150 to 500 psig but can be tuned up to 1500 psi if required. Actuation pressure is normally 65 psi but can be lowered if needed. Custom requests are welcome.

ELDV-1

Purged Standard Mini-Diaphragm Valve
Available with 6, 10 Ports and optional internal sampling loop

- ❑ **LT version: Max 100°C**
- ❑ **Pressure: Max 150 psig**
- ❑ **Port sizes: 1/16" and 1/8"**
- ❑ **Cross-port leak rate @ Max Pressure: 9.0×10^{-9} atm-cc/sec He**



ELDV-2

Purged High Performance Mini-Diaphragm Valve
Available with 6, 10 Ports and optional internal sampling loop

- ❑ **LT version: Max 100°C**
- ❑ **MT version: Max 180°C**
- ❑ **Pressure: Max 300 psig**
- ❑ **Port sizes: 1/16" and 1/8"**
- ❑ **Cross-port leak rate @ Max Pressure: 4.7×10^{-11} atm-cc/sec He**



MDVG

Purged Premium Grade Mini-Diaphragm Valve
Available with 6 and 10 Ports and optional internal sampling loop

- ❑ LT version: Max 100°C
- ❑ MT version: Max 180°C
- ❑ HT version: Max 250°C
- ❑ Pressure: Max 500 psig
- ❑ Port sizes: 1/16" and 1/8"
- ❑ Cross-port leak rate @ Max Pressure: 3.0x10⁻¹² atm-cc/sec He



MDVG-ISL-SERIES Internal Sampling Loop

- ❑ Available Sampling Loops:
0.5µl, 1.0µl, 1.5µl, 2.0µl, 3.0µl, 5.0µl
- ❑ Also available with Simultaneous or Alternate Double Sampling Loop
- ❑ Available with one internal and one external sampling loop on the same valve
- ❑ Also available in the ELDV-SERIES

10 ports



DADV Double Actuation GC Diaphragm valve

Independent Normally closed and open actuation

(All ports can be opened or closed at the same time)

Purged Premium Grade Mini-Diaphragm Valve
Available with 6 and 10 Ports

- ❑ LT version: Max 100°C
- ❑ MT version: Max 180°C
- ❑ HT version: Max 250°C
- ❑ Pressure: Max 500 psig
- ❑ Port size: 1/16" and 1/8"
- ❑ Cross-port leak rate @ Max Pressure: 3.0x10⁻¹² atm-cc/sec He



MDVS Mini Double Sealed Diaphragm Valve

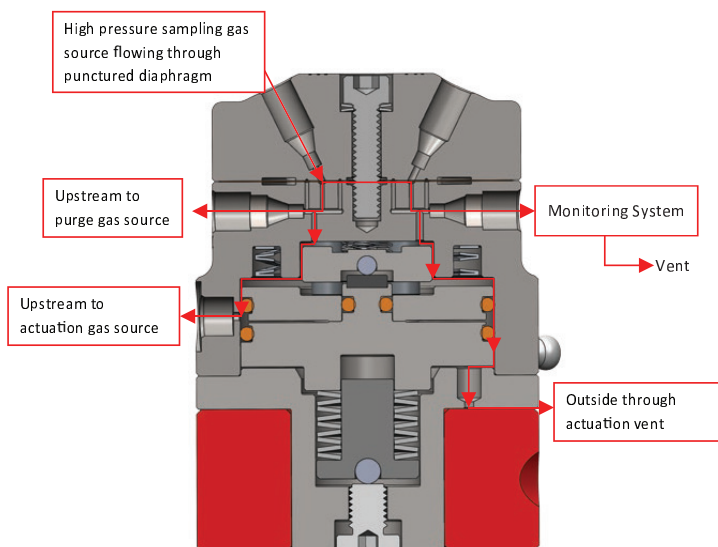
For critical applications.

See AN-07 in the CookBook or on our Website

- ❑ LT version: Max 100°C
- ❑ MT version: Max 180°C
- ❑ HT version: Max 250°C
- ❑ Pressure: Max 500 psig
- ❑ Port size: 1/16" and 1/8"
- ❑ Cross-port leak rate @ Max Pressure:
3.0x10⁻¹² atm-cc/sec He

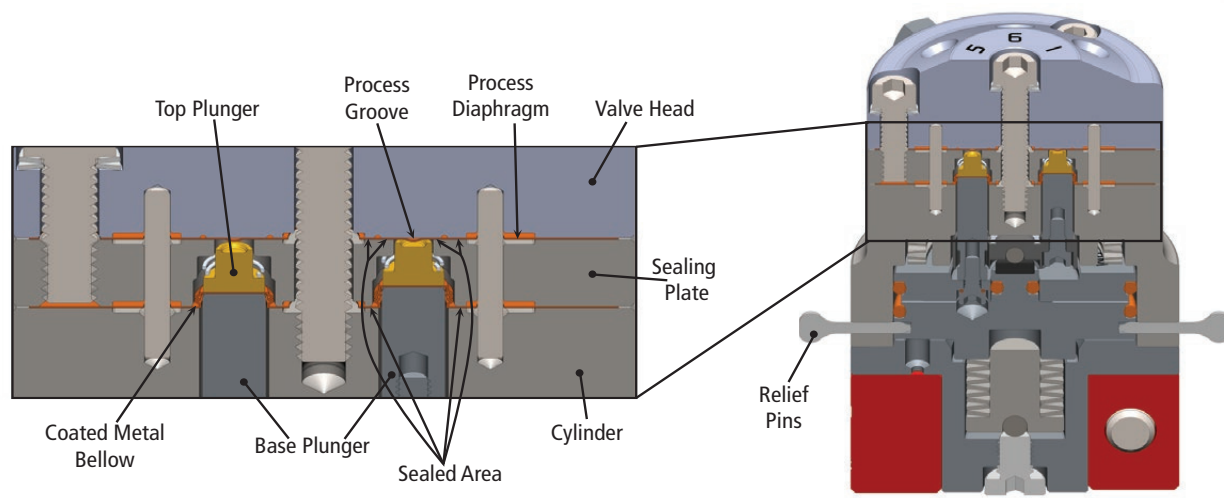
- ❑ Avoids the release of dangerous compounds in the surrounding environment
- ❑ No risk of any diffusion or permeation into or from the critical process zone of the valve
- ❑ Safer operation in case of leak through diaphragm

This is our most recent development in high performance GC diaphragm valve technology which addresses the handling of toxic, corrosive and flammable samples in a safer way. The new sealed valve will contain any leak or diffusion through the valve diaphragm and evacuate it by the purge outlet. This new feature gives extra protection, leakage monitoring capability and avoids the release of hazardous compounds in the air or cabinet. See AN-07 for typical application.

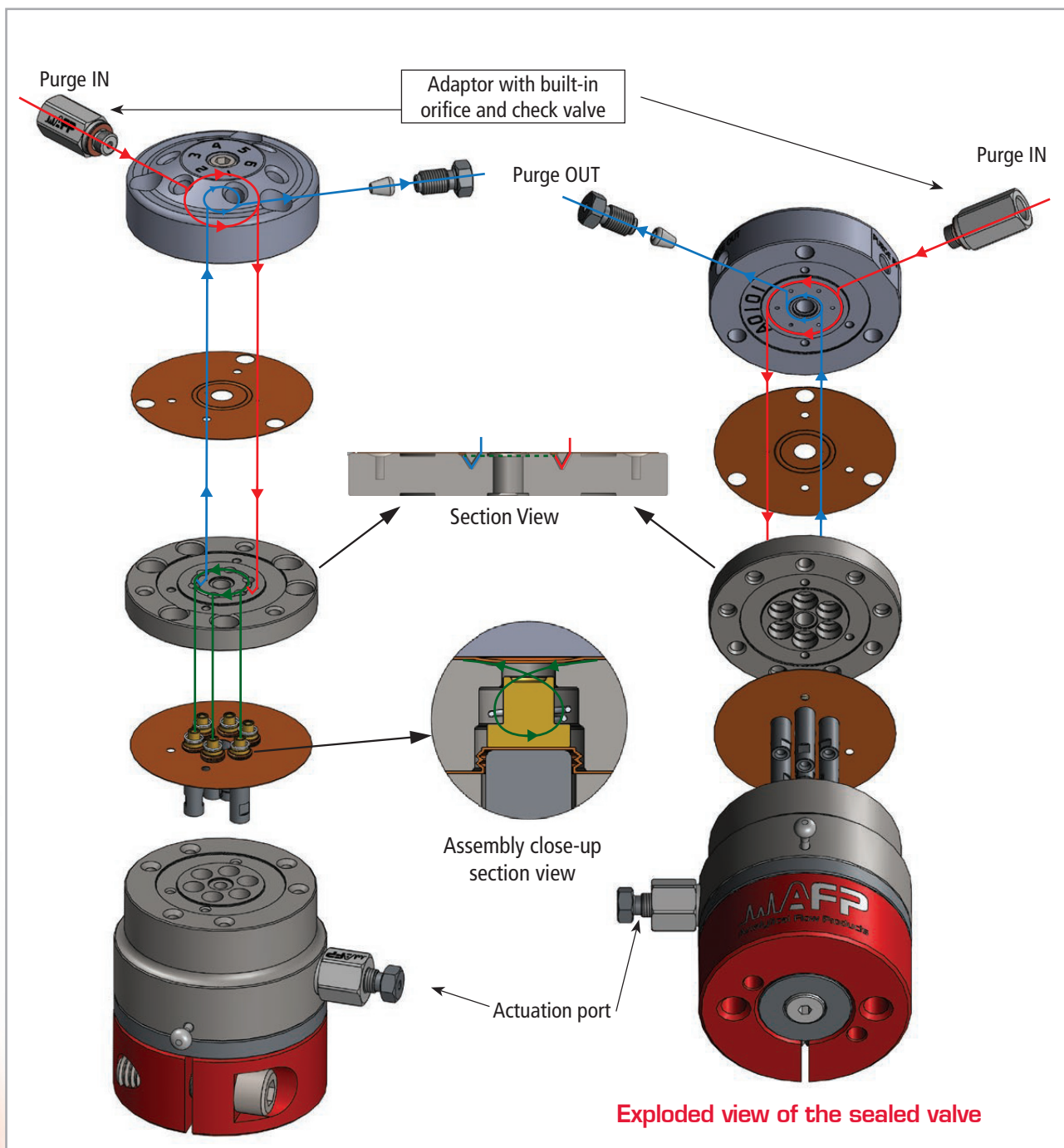


Diaphragm failure mode of standard valve

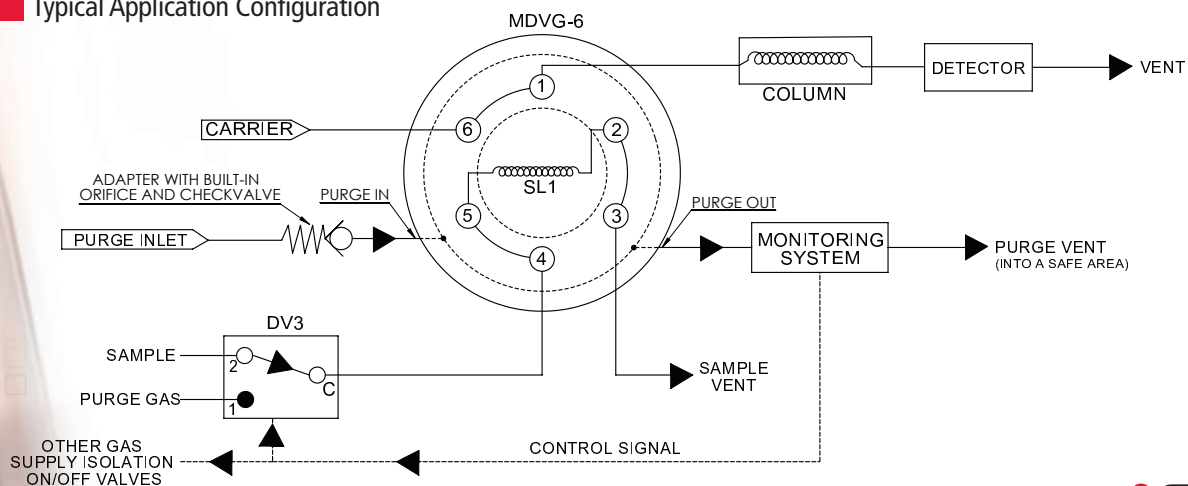
* Complete isolation of process side from actuation/surrounding environment
Ideal for unstable/reactive/toxic gas sampling applications



Isolation of the actuation by a coated metal diaphragm



■ Typical Application Configuration



MRV Series**Unpurged**

Available with 4, 6 and 10 Ports

Port sizes available: 1/16"

- ❑ Rotor R2 (modified PEEK)
 - T = ambient to 225°C
 - Pressure : 425 psig
- ❑ Rotor R3 (modified Polyimide)
 - T = ambient to 225°C
 - Pressure : 425 psig

**RVG****Generic Unpurged**

Available with 4, 6 and 10 Ports

Port sizes available: 1/16" and 1/8"

- ❑ Rotor R2 (modified PEEK)
 - T = ambient to 225°C
 - Pressure: 350 psig
- ❑ Rotor R3 (modified Polyimide)
 - T = ambient to 260°C
 - Pressure : 350 psig
- ❑ Rotor R4 (modified PPS)
 - T = ambient to 175°C
 - Pressure: 350 psig

**RV-OLP, RV-CLP, RV-S & RV-ISL, Purged GC Rotary Valve**

Allow realtime valve diagnostics

Available with 4,6 and 10 Ports

Port sizes available : 1/16"and 1/8"

- ❑ Rotor R2 (modified PEEK)
 - T = ambient to 225°C
 - Pressure: 350 psi
- ❑ Rotor R3 (modified Polyimide)
 - T = ambient to 260°C
 - Pressure : 350 psi
- ❑ Rotor R4 (modified PPS)
 - T = ambient to 175°C
 - Pressure: 350 psi



ROTOR CONFIGURATIONS

THE "G" SERIES:

This series is designed and manufactured to allow direct replacement for standard rotary GC valves. There is an improved surface finish compared to existing products by our proprietary surface treatment done on the rotor to reduce the overall torque required to operate the valve. This means a lighter pre-load assembly setting is required so this will result in less mechanical force pushing down the rotor, leading to a reduction of friction that will give a longer life time for the valve.

The "OLP" SERIES:

PROTECTION AGAINST INBOARD/OUTBOARD CONTAMINATION

The rotor has built-in protection against inboard and outboard contamination. Ideal for high purity applications or when used with helium as carrier gas.

The "CLP-D" SERIES:

DYNAMIC PURGING

The "D" stands for dynamic. This has a continuous purge flow at all times into the system, whatever valve position.

The "CLP-S" SERIES:

STATIC PURGING

Varies from the "D" version in having the purge flow interrupted during actuation. Useful when sampling high pressure liquid samples.

The "S" SERIES:

PURGED SAMPLE STREAM SELECTION VALVE

This series has a purged sample stream selection rotary valve. The rotor has built in protection against inboard and outboard contamination. There are also extra grooves to allow isolation between various selections.

- Several configurations, 1/16", 1/8" port size, purge/unpurge and number of inlets Ideal for use with MEA programmable electrical actuator.

