ASEPCO Diaphragms

FEATURES AND BENEFITS

- **All diaphragms meet VI standards and are FDA CFR 177.2600 compliant**
- **Meets multiple international standards**
- **Suitable for biotechnology and pharmaceutical applications**
- **Diaphragm can be changed extremely quickly with little training**
- **No need for re-torquing**

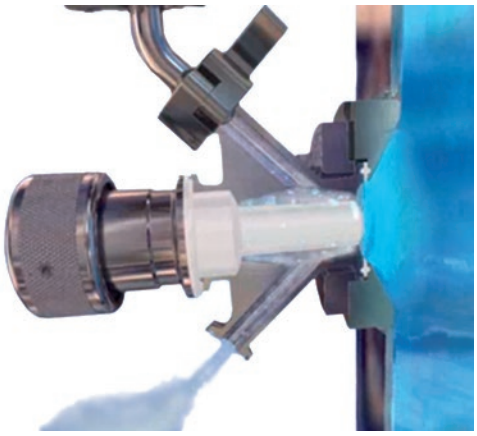
DESCRIPTION

Patented Radial diaphragm™ valve and Weirless Radial diaphragm valve designs

The ASEPCO patented valve architecture (US Patent #5152500) includes a unique radial diaphragm that forms three seals with the valve: the seal at the inlet, a seal with the compound shoulder, and an O-ring seal at the bottom of the valve chamber. A behind-the-seat flow path allows complete flushing of the valve chamber. The result is a superb aseptic design that promotes self-draining and easy cleaning.

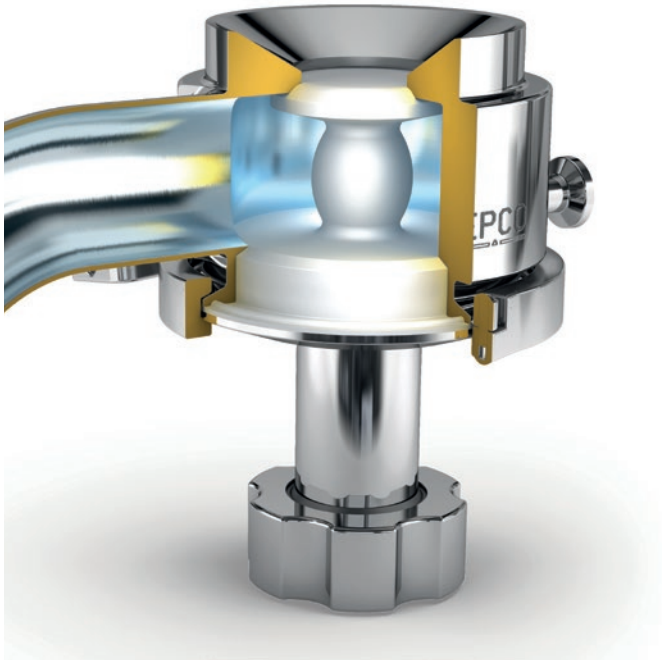
Diaphragm replacement is done with a hygienic clamp that never needs adjusting—no tools are required for maintenance and no bolts need to be periodically tightened with a torque wrench. The result is that our customers see significantly reduced maintenance costs over standard weir valves—some as much as an 80% reduction.

ASEPCO diaphragms come in a variety of materials (Silicone, EPDM, Silicone Plus, EPDM Plus, Viton, and PTFE) so that you can select the material that can best suit your specific application.



Behind-the-Seat Flow Path

When the valve is closed, the unique CIP/SIP “behind-the-seat flow path” can be created if you add a CIP or SIP port. This flow path makes it easy to steam or clean the valve while the valve is closed. This allows for validated aseptic and sterile connections and transfers to be performed.



DIAPHRAGM SPECIFICATIONS, MATERIAL AVAILABILITY, AND SIZES

Material specifications			
Silicone	Medical grade (platinum cured)	-51 to 135C (-60 to 275F)	• Low cost • Physically resilient • Two finishes: white and clear • Widely used in pharmaceutical apps
Silicone Plus	Silicone with Parylene surface treatment	-51 to 135C (-60 to 275F)	• The same features of Silicone • Two times the longevity of Silicone
EPDM	Ethylene propylene diene monomer (peroxide cured)	-51 to 135C (-60 to 275F)	• Widely used in pharmaceutical apps • Relatively low cost • Wide temperature range; good in steam applications • Fairly chemically resistant; should not be used with solvents or petroleum agents • Black color
EPDM Plus	EPDM with Parylene surface treatment	-35 to 135C (-30 to 275F)	• Similar properties to EPDM; however, does not have the same stickiness • Two times the longevity of EPDM • Moderate cost
Viton A	Fluoropolymer elastomer	-20 to 200C (-4 to 392F)	• The most commonly used version of Viton • Should NOT be used with most ketones or esters • Should not be used with extended steam exposure • Higher cost that EPDM and Silicone
Viton A (SR)	Steam resistant version of Viton A	-20 to 200C (-4 to 392F)	• Performs well in conditions with extended steam
Viton GF	Peroxide cured F-type Gum Polymers	-20 to 200C (-4 to 392F)	• More chemically resistant than Viton A • Offers good steam resistance • It should not be used with most ketones and esters • Higher cost than Viton A
PTFE	Polytetrafluoro-ethylene	4 to 260C (39 to 500F)	• Extremely chemically resistant — often used with heptane and methyl chloride • Extremely steam resistant • Not really an elastomer; has cold flow issues that can result in leaking • Relatively higher cost to other materials • Currently only available for tank valves

ORDERING INFORMATION

Valve size availability						
Material	**0.5 inch**	**1 inch**	**1.5 inches**	**2 inches**	**3 inches**	**4 inches**
Silicone	▲	▲	▲	▲	▲	▲
Silicone Plus	▲	▲	▲	▲	▲	
EPDM	▲	▲	▲	▲	▲	▲
EPDM Plus	▲	▲	▲	▲	▲	
Viton A	▲	▲		▲		
Viton A (SR)	▲	▲		▲	▲	
Viton GF				▲	▲	
PTFE (solid)		■	■	■	■	

■ Currently PTFE diaphragms are only available for tank valves.

ORDERING INFORMATION

Radial diaphragm — USP Class VI — FDA 21CFR 177.2600				
Part number	**Size – inches**	**Diaphragm material**	**Colour**	**Variant**
SL05	0.5	Silicone	White	Straight
SL10	1			Bellows
SL17	1.5			Straight
SL20	2			Bellows
SL30	3			Straight
SL40	4			Straight
PS05	0.5	Silicone Plus		Parylene surface
PS10	1			Parylene surface
PS17	1.5			Parylene surface Straight
PS20	2			Parylene surface
PS30	3			
PSG05	0.5			Parylene surface
EP05	0.5	EPDM	Black	Straight
EP10	1			Bellows
EP17	1.5			Straight
EP20	2			Bellows
EP30	3			Straight
EP40	4			Straight
PE05	0.5	EPDM Plus		Parylene surface Straight
PE10	1			Parylene surface
PE17	1.5			Parylene surface Straight
PE20	2			Parylene surface
PE30	3			Parylene surface
PEG05	0.5			Parylene surface
VF05	0.5	Viton “GF”		
VF10	1			Straight
VF20	2			Straight
VF30	3			Straight
VGF05	0.5			satellite
VA05	0.5	Viton “A” - steam grade		Straight
VA10	1			Bellows
VA20	2			Straight
VA30	3			Straight
VT05	0.5	Viton A	Cream	Straight
VT10	1			Bellows
VT20	2			Bellows

Radial diaphragm extended — USP Class VI — FDA 21CFR 177.2600				
Part number	**Size – inches**	**Diaphragm material**	**Colour**	**Variant**
SE17	1.5	Silicone	White	
SE20	2			
SE30	3			
SG05	0.5			
PSE17	1.5	Silicone Plus		Parylene surface
EE17	1.5	EPDM	Black	
EE20	2			
EE30	3			
PEE17	1.5	EPDM Plus		Parylene surface
VFE17	1.5	Viton “GF”		
VFE30	3			
EG05	0.5	EPDM		
VG05	0.5	Viton A	Cream	

Radial diaphragm — USP Class VI — FDA 21CFR 177.1550				
Part number	**Size – inches**	**Diaphragm material**	**Colour**	**Variant**
PF10-1	1	PTFE assembly for standard Asepco actuators	White	
PF17-1	1.5			
PF20-1	2			
PF30-1	3			Bellows

Radial diaphragm extended — USP Class VI — FDA 21CFR 177.1550				
Part number	**Size – inches**	**Diaphragm material**	**Colour**	**Variant**
PFG05-1	0.5	PTFE assembly for standard Asepco actuators	White	

Weirless diaphragm — USP Class VI — FDA 21CFR 177.2600				
Part number	**Size – inches**	**Diaphragm material**	**Colour**	**Variant**
IS08	0.75	Silicone	White	
IS10	1			
IS15	1.5			
IE08	0.75	EPDM	Black	
IE10	1			
IE15	1.5			
FQ05	0.5	Compact EPDM Plus		Paralyne surface
FE05	0.5	Compact EPDM		
IQ08	0.75	EPDM Plus		Paralyne surface
IQ10	1			Parylene surface
IQ15	1.5			Parylene surface

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