Diaphragm Valves Elastomer Diaphragms

Elastomer Diaphragms

The Saunders® diaphragm is an Intricate design and not a simple injection molded part. Layers of proprietary blended and calendared (rolled into sheet form) rubber is vulcanized with high strength woven reinforcement .

Type EE Grade EPDM Diaphragms

The EE grade diaphragm is constructed from Ethylene propylene diene monomer (EPDM) base polymer. Originally developed to meet BioPharm customer requirements for an EPDM grade, this diaphragm has demonstrated excellent performance on the full range of bio-process applications. The EE grade diaphragm has full industry compliance. Available post cured variation designated as grade EF.

Type 500 Grade Silicone Diaphragms

The 500 grade diaphragm uses a dicumyl cured silicone that is fabric reinforced to optimize flex life. This is a white grade of diaphragm which offers very low levels of extractables and leachables. Silicone is ideal for low temperature environments and applications. Like all Life Science Diaphragms, the 500 grade Silicone Diaphragm is FDA conforming and USP Class VI tested and certified.

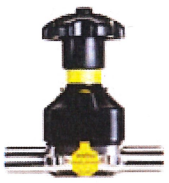
Type PV Grade Passivation Diaphragms

The Saunders PV passivation diaphragm has been developed specifically for use during the passivation of stainless steel systems reducing installation and set up costs for the end user.

Key Features

1. Reduced cost versus single use PTFE diaphragm
2. High visibility tag reduces risk of diaphragm not being replaced
3. 100% interchangeable with Saunders Life Science PTFE diaphragm range

PV Passivation Diaphragm



PV Passivation Diaphragm Installed on Valve

Diaphragm Build-up

Type 425 Grade EPM Diaphragms

Manufactured from inherently stable EPM (a copolymer of Ethylene and Propylene monomers).

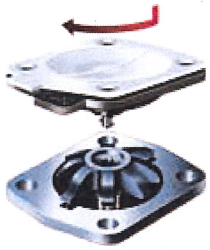
Key Features

1. Organic peroxide-cured for reduced extractables and leachables
2. Enhanced temperature performance and chemical resistance due to fully saturated hydrocarbon backbone with no double bonds
3. Available post cured variation designated as grade E3

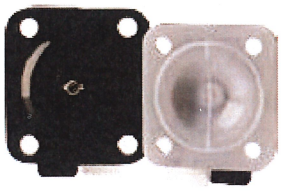
Please visit www.saundersdrawings.com for current library of drawings in PDF, 2D DWG, and 3D STP formats.

Saunders®
the science inside

Diaphragm Valves PTFE Diaphragms



PTFE Type Diaphragm



EX Endurance Diaphragm

Saunders® PTFE type diaphragms utilize bayonet attachment to compressor to reduce point loading, improve sealing performance and facilitate installation.

PTFE Diaphragms

Saunders® Life Science PTFE diaphragms are robust two piece leaf type. This design uses a wetted PTFE face backed with a fabric reinforced rubber diaphragm. Critical performance factors include: resistence to compression set, mechanical strength, and thermal resistance properties.

Saunders® has front-to-back ownership of all phases of diaphragm development and manufacture. This includes the sintering and coining of PTFE diaphragm faces as well as the compounding, calendering and compression molding of elastomer diaphragms and backing cushions.

Saunders® EX Endurance Diaphragms

Key Features

1. EX Endurance Diaphragms offers outstanding high temperature performance and is resistant to prolonged exposure to high temperature steam up to 175° C (347° F)
2. EX Endurance is ideal for steam distribution and supply, sterile barrier and block and bleed applications
3. Improved Seal to Atmosphere performance and reduced requirements for re-torqueing of fasteners after thermocycling

Type 214/425 PTFE Diaphragms

Key Features

1. 100% virgin PTFE product contact face which is inert and unaffected by media common to bio-process applications
2. Industry conforming low levels of extractables and leachables
3. Fabric reinforced EPM backing

Type 214S/425 Modified PTFE Diaphragms

Key Features

1. Reduction in cold flow deformation typically associated with conventional PTFE components present in BioPharm systems
2. Improved performance under aggressive steam sterilization and pure water-based media
3. Fabric reinforced EPM backing

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