NEWMAN NEWFLO**

Replacement Diaphragms for ITT®, Saunders® and Gemü™ Valves



PRODUCTS OF INTEGRITY...FROM PEOPLE OF INTEGRITY



Precision fit and designed for ITT®, Saunders® and Gemü™ valves, Newman NewFlo™ diaphragms deliver exceptional performance in today's demanding pharmaceutical processing environment. As always, you can count on Newman's reputation for excellence, success and expertise in the pharmaceutical industry.

Time-Tested Materials, Third Party Verified Performance.

- The elastomer backing is manufactured from Newman's famous polymer-rich 2107 EPDM compound.
- The TFM™ facing of the diaphragm is made from time proven modified fluoropolymer, the choice of the diaphragm valve industry for pharmaceutical applications and validated for years. Manufacturer certified USP Class VI.
- 3. Mechanical testing by third party industry experts to 500 steam cycles and over 100,000 valve cycles has demonstrated exceptional steam resistance and long term durability. Newman's backings are shown to impart outstanding sealing properties at the lowest bonnet torque values.

Certified Peace of Mind and Ground Breaking Traceability.

- 1. Each diaphragm meets the requirements of FDA CFR Title 21 177.2600 (elastomers) and paragraph 177.1550 (perfluorocarbons) and USP Class VI.
- 2. Setting a new standard for traceability and causing a stir across the industry, every diaphragm is fully **batch** traceable **at the part level**, an exclusive in the industry (patent pending). This means that you will know the exact style, size, composition and provenance of every diaphragm in your system, simply by looking at the back of the diaphragm.
- 3. Each diaphragm is backed by Newman's unbeatable 35 year history in manufacturing of premium elastomer parts for the pharmaceutical industry.



Newman Sanitary Gasket Company (NSG) does not manufacture or sell ITT®, Saunders® or Gemü™ OEM valves or diaphragms. NSG is not affiliated with any of these companies, nor is NSG or any of its products sponsored by or endorsed by any of these companies.

ITT® is a registered trademark of ITT Manufacturing Enterprises, Inc.

Gemü™ is a trademark of Gebruder Muller Apparatebau GmbH & Co., KG and/or Gemü Valves, Inc.

Saunders® is a registered trademark of Crane Process Flow Technologies Ltd.

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NEWMAN NewFlo®

Replacement Diaphragms for ITT® Weir Style Diaphragm Valves Technical Data Sheet

Elastomer Backed Two Piece TFM (PTFE) Diaphragms for ITT Pure-Flo® and Dia-Flo® Valves

Genuine Newman 2107 EPDM (Ethylene Propylene Diene Monomer)

Genuine Newman 2107 EPDM is the material of choice for many food and biopharm processing applications, surpassing other EPDM's on the market for decades in performance and reliability. An excellent general purpose elastomer, resistant to many chemicals, polar solvents, many CIP solutions, and most aqueous-based systems. When used as a backing in two-piece diaphragms, Newman 2107 has been shown to impart outstanding sealing properties at the lowest bonnet torque values, a substantial improvement over OEM parts.

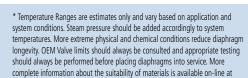
Genuine Dyneon™ TFM™ (Modified PTFE) with Elastomer Backing

Genuine Dyneon TFM[™] from 3M[®] when used in conjunction with Newman's proprietary processing has resulted in the highest chemical resistance and the lowest permeability and makes it ideal for almost all processing conditions where extended service life is desired. It is resistant to almost all chemicals, solvents, and CIP solutions, and has been tested to 500 one-hour steam cycles/100,000 valve cycles in many valve configurations. It is ideal for continuous steam, hot WFI and processing areas.* These diaphragms are shipped together with a paired elastomer backing piece, either made of Newman 2107 EPDM or Viton® A for extended temperature service (special order).

Temperature Range (with EPDM backing): -20° F to 300° F* Temperature Range (with Viton® backing): -0° F to 450° F*

Certificates Available:

- FDA Extraction Studies per 21CFR177.2600 (elastomers) and 21CFR177.1550 (PTFE)
- Testing according to USP Class VI Chapter <77> and Chapter <88>
- RoHS Directive 2002/95/EC
- ISO 9001:2008 Certificate of Registration



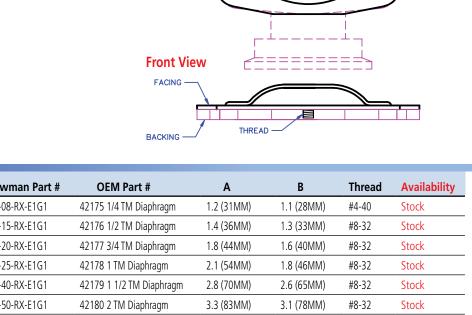
www.newmangasket.com.

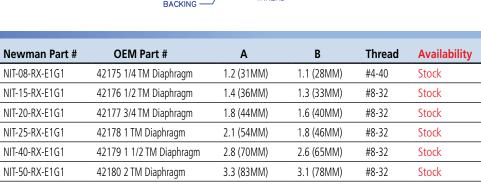
Viton® is a registered trademark of DuPont Performance Elastomers Teflon® is a registered trademark of DuPont

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Top View



NEWMAN NewFlo™

Replacement Diaphragms for ITT® Weir Style Diaphragm Valves
Technical Data Sheet

Single Piece Diaphragms for ITT Pure-Flo® and Dia-Flo® Valves

Genuine Newman 2107 EPDM (Ethylene Propylene Diene Monomer)

Genuine Newman 2107 EPDM is the material of choice for many food and biopharm processing applications, surpassing other EPDM's on the market for decades in performance and reliability. An excellent general purpose elastomer, resistant to many chemicals, polar solvents, many CIP solutions, and most aqueous-based systems. Used for general processing, acid/alkalis, hot water and occasional steaming.* Low permeability to gases. Useful in higher pressure and vacuum applications.

Temperature Range: -20° F to 300° F*
Continuous Liquid Media: -20° F to 200° F

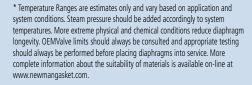
Genuine VITON® GF (FKM)

Genuine DuPont Viton® GF is the ground-breaking material of choice for more extreme food and biopharm processing conditions, only offered through Newman. An excellent overall elastomer, resistant to a wide variety of chemicals, many polar and non-polar solvents, CIP solutions and aqueous-based systems. Used for general processing, most acids and bases, hot water, and excellent steam resistance.* Low permeability to gases. Useful in higher pressure and vacuum applications where both the sealing properties of rubber and the chemical resistance of Teflon® like materials are required.

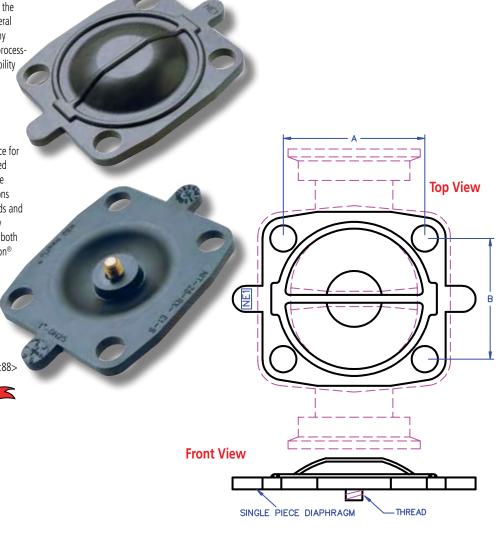
Temperature Range: 18° F to 450° F*
Continuous Liquid Media: 0° F to 300° F

Certificates Available:

- FDA Extraction Studies per 21CFR177.2600 (elastomers) and 21CFR177.1550 (PTFE)
- Testing according to USP Class VI Chapter <77> and Chapter <88>
- ADI Free
- RoHS Directive 2002/95/EC
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Saunders® is a registered trademark of Crane Process Flow Technologies Ltd.

Newman Part #	EPDM	GF Viton®	OEM Part # ITT PureFlo®	OEM Part # ITT Dia-Flo®	Α	В	Thread	Availability
NIT-08-RX-	E1-S	VG1-S	41502 1/4 17 EPDM Dia	N/A	1.2 (31MM)	1.1 (28MM)	#4-40	Stock
NIT-15-RX-	E1-S	VG1-S	41281 1/2 17 EPDM Dia	43291 1/2 17 EPDM Dia	1.5 (37MM)	1.3 (34MM)	#8-32	Stock
NIT-20-RX-	E1-S	VG1-S	41282 3/4 17 EPDM Dia	43292 3/4 17 EPDM Dia	1.8 (44MM)	1.6 (40MM)	#8-32	Stock
NIT-25-RX-	E1-S	VG1-S	41283 1 17 EPDM Dia	43294 1 17 EPDM Dia	2.1 (54MM)	1.8 (46MM)	#1/4-20	Stock
NIT-40-RX-	E1-S	VG1-S	41284 1 1/2 17 EPDM Dia	43295 1 1/2 17 EPDM Dia	2.7 (69MM)	2.6 (65MM)	#1/4-20	Stock
NIT-50-RX-	E1-S	VG1-S	41285 2 17 EPDM Dia	43297 2 17 EPDM Dia	3.3 (83MM)	3.1 (78MM)	#1/4-20	Stock





NEWMAN NewFlo™

Replacement Diaphragms for Gemü™ Weir Style Diaphragm Valves Technical Data Sheet

Elastomer Backed Two Piece TFM Diaphragms for Gemü™ Valves

Genuine Newman 2107 EPDM (Ethylene Propylene Diene Monomer)

Genuine Newman 2107 EPDM is the material of choice for many food and biopharm processing applications, surpassing other EPDM's on the market for decades in performance and reliability. An excellent general purpose elastomer, resistant to many chemicals, polar solvents, many CIP solutions, and most aqueous-based systems. When used as a backing in two-piece diaphragms, Newman 2107 has been shown to impart outstanding sealing properties at the lowest bonnet torque values, a substantial improvement over OEM parts.

Genuine Dyneon™ TFM™ (Modified PTFE) with Elastomer Backing

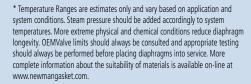
Genuine Dyneon™TFM™ from 3M® when used in conjunction with Newman's proprietary processing has resulted in the highest chemical resistance and the lowest permeability and makes it ideal for almost all processing conditions where extended service life is desired. It is resistant to almost all chemicals, solvents, and CIP solutions, and has been tested to 500 one-hour steam cycles/100,000 valve cycles in many valve configurations. It is ideal for continuous steam, hot WFI and processing areas.*

These diaphragms are shipped together with a paired elastomer backing piece, either made of Newman 2107 EPDM or Viton® A for extended temperature service (special order).

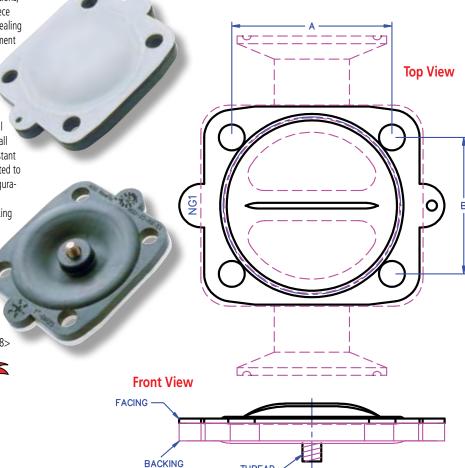
Temperature Range (with EPDM backing): -20° F to 300° F*
Temperature Range (with Viton® backing): -0° F to 450° F*

Certificates Available:

- FDA Extraction Studies per 21CFR177.2600 (elastomers) and 21CFR177.1550 (PTFE)
- Testing according to USP Class VI Chapter <77> and Chapter <88>
- ADI Free
- RoHS Directive 2002/95/EC
- ISO 9001:2008 Certificate of Registration



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Saunders® is a registered trademark of Crane Process Flow Technologies Ltd.

Newman Part #	OEM Part #	Α	В	Thread	Availability
NGU-25-RX-E1G1	600/025/M5E	2.1 (54MM)	1.8 (46MM)	1/4 - 20	Stock
NGU-40-RX-E1G1	600/040/M5E	2.8 (70MM)	2.6 (65MM)	1/4 - 20	Stock
NGU-50-RX-E1G1	600/050/M5E	3.2 (82MM)	3.1 (78MM)	1/4 - 20	Stock



Technical Data Sheet

Replacement Diaphragms for Gemü™ Weir Style Diaphragm Valves

Single Piece Diaphragms for Gemü™ Valves

Genuine Newman 2107 EPDM (Ethylene Propylene Diene Monomer)

Genuine Newman 2107 EPDM is the material of choice for many food and biopharm processing applications, surpassing other EPDM's on the market for decades in performance and reliability. An excellent general purpose elastomer, resistant to many chemicals, polar solvents, many CIP solutions, and most aqueous-based systems. Used for general processing, acid/alkalis, hot water and occasional steaming. *Low permeability to gases. Useful in higher pressure and vacuum applications.

> Temperature Range: -20° F to 300° F* Continuous Liquid Media: -20° F to 200° F

Genuine VITON® GF (FKM)

Genuine DuPont Viton® GF is the ground-breaking material of choice for more extreme food and biopharm processing conditions, only offered through Newman. An excellent overall elastomer, resistant to a wide variety of chemicals, many polar and non-polar solvents, CIP solutions and aqueous-based systems. Used for general processing, most acids and bases, hot water, and excellent steam resistance.*Low permeability to gases. Useful in higher pressure and vacuum applications where both the sealing properties of rubber and the chemical resistance of Teflon® like materials are required.

> Temperature Range: 18° F to 450° F* Continuous Liquid Media: 18° F to 300° F

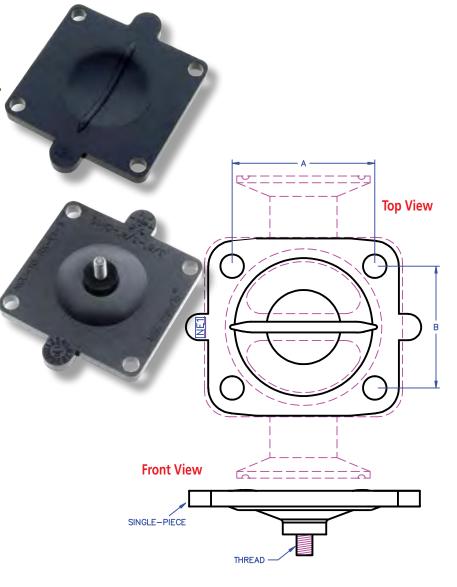
Certificates Available:

- FDA Extraction Studies per 21CFR177.2600 (elastomers) and 21CFR177.1550 (PTFE)
- Testing according to USP Class VI Chapter <77> and Chapter <88>
- RoHS Directive 2002/95/EC
- ISO 9001:2008 Certificate of Registration



* Temperature Ranges are estimates only and vary based on application and system conditions. Steam pressure should be added accordingly to system temperatures. More extreme physical and chemical conditions reduce diaphragm longevity. OEM Valve limits should always be consulted and appropriate testing should always be performed before placing diaphragms into service. More complete information about the suitability of materials is available on-line at www.newmangasket.com.

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Newman Part #	EPDM	GF Viton®	OEM Part #OEM	Α	В	Thread	Availability
NGU-08-RX	E2-S	VG1-S	600/008/M17 (3,16,13)	0.9 (22MM)	0.9 (22MM)	N/A	Stock
NGU-10-RX-	E1-S	VG1-S	600/010/M17 (3,16,13)	1.5 (39MM)	1.7 (44MM)	M4 x .7	Stock
NGU-25-RX-	E1-S	VG1-S	600/025/M17 (3,16,13)	2.1 (54MM)	1.8 (46MM)	1/4 - 20	Stock
NGU-40-RX-	E1-S	VG1-S	600/040/M17 (3,16,13)	2.8 (70MM)	2.6 (65MM)	1/4 - 20	Stock
NGU-50-RX-	E1-S	VG1-S	600/050/M17 (3,16,13)	3.2 (82MM)	3.1 (78MM)	1/4 - 20	Stock



Replacement Diaphragms for Gemü™ Weir Style Diaphragm Valves Technical Data Sheet

Single Piece Laminated Diaphragms for Gemü™ Valves

EPDM (Ethylene Propylene Diene Monomer) Laminated TFM (Modified PTFE)

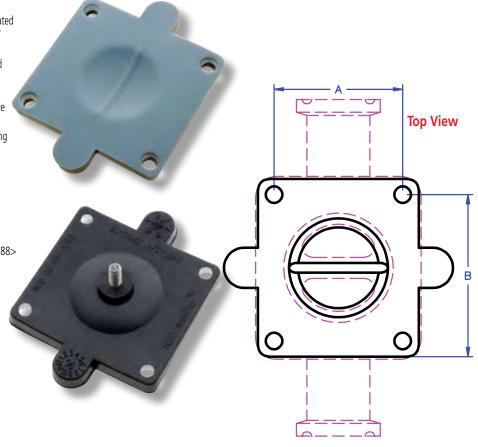
Single piece Newman NewFlo™ Diaphragms made from TFM laminated onto Newman 2107 EPDM are chosen for Gemü™ Valves under 1" (DN25) where the chemical resistance of Teflon® (PTFE) is required. It is resistant to most chemicals, solvents, CIP solutions, hot WFI and steam.* Since two dissimilar materials are bonded together in this design, mechanical stresses can be formed during actuation. As a result, Newman NewFlo™ Diaphragms are only made for smaller size valves where the valve stroke is limited. Two-piece EPDM/TFM diaphragms are recommended for larger valve sizes. Test before using on higher pressure or vacuum systems.

Temperature Range: -20° F to 300° F* Continuous Liquid Media: -20° F to 300° F

Certificates Available:

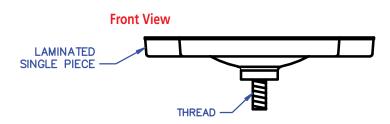
- FDA Extraction Studies per 21CFR177.2600 (elastomers) and 21CFR177.1550 (PTFE)
- Testing according to USP Class VI Chapter <77> and Chapter <88>
- ADI Free
- RoHS Directive 2002/95/EC
- ISO 9001:2008 Certificate of Registration





* Temperature Ranges are estimates only and vary based on application and system conditions. Steam pressure should be added accordingly to system temperatures. More extreme physical and chemical conditions reduce diaphragm longevity. OEMValve limits should always be consulted and appropriate testing should always be performed before placing diaphragms into service. More complete information about the suitability of materials is available on-line at www.newmangasket.com.

Teflon® is a registered trademark of DuPont



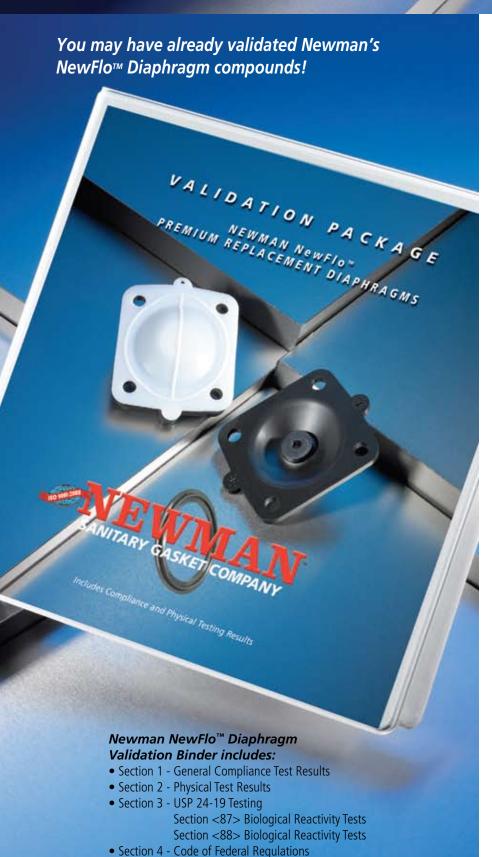
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Newman Part #	OEM Part #	Α	В	Thread	Availability
NGU-08-RX-E1L1	600/008/M5A (52)	0.9 (22MM)	0.9 (22MM)	N/A	Stock
NGU-10-RX-E1L1	600/010/M5A (52)	1.5 (39MM)	1.7 (44MM)	M4 x .7	Stock
NGU-25-RX-E1L1	600/025/M5A (52)	2.1 (54MM)	1.8 (46MM)	1/4 - 20	Stock



VALIDATION



Section 5 - Certificates of Comformance

Validation of Newman's diaphragms in your system may not require the rigorous procedures and high cost you may be facing with other replacement diaphragms. Specifically created to be substituted in your valves as functional equivalents, Newman diaphragms are precision designed and manufactured from the highest quality conforming materials already validated in the industry. We have chosen to use the best modified fluoropolymer, TFM™ (genuine Dyneon™ Hostaflon® TFM™ from 3M®), which has been shown to have superior steam resistance and outstanding flex life.

The EPDM backing is made from Newman's premium, polymer rich 2107 compound: the same EPDM used in our gaskets, "O"-rings and OEM parts. You have no doubt validated at least one of our 2107 EPDM products already in use in your processing areas. Newman's EPDM has demonstrated exceptional chemical and steam resistance and provides enhanced sealing properties. Under testing, Newman's diaphragms have successfully performed at the lowest bonnet torque values and have not required retorqueing. This benefits service life and reduces maintanence. Newman's EPDM has shown superior dynamic strength that translates into more cycles before changeout is needed.

Newman NewFlo™ Diaphragms: Setting a new standard of excellence in sanitary valve diaphragms:

- Proven reputation
- Proven materials
- Proven performance
- Unmatched traceability

New value that you can depend on!





Newman Sanitary Gasket Company (NSG) NewFlo™ Replacement Diaphragm Fact Sheet

Product Spotlight	Precision fit for ITT®, Saunders® and Gemü™ valves, the NewFlo™ Replacement Diaphragm is specifically designed as a functional equivalent replacement diaphragm for weir-style valves. Diaphragm facings use the best modified fluoropolymer, TFM™, which has been shown to have superior steam resistance and outstanding flex life. Elastomer diaphragms and backings use Newman's high-performance, polymer-rich 2107 compound, the same material used in NSG gaskets, O-rings and OEM parts.
Product Differentiators	Quality: Newman controls all materials and parts, the best grades from the best manufacturers – and its own proprietary elastomer formulations. Reliability: Rigorous testing by third-party industry experts demonstrates long-term durability through 500 steam cycles and more than 100,000 valve cycles. Maintenance: Less retorquing, plus increased diaphragm longevity equals less maintenance and less plant down-time. Traceability: NewFlo™ Diaphragms are fully batch traceable at the part level – an exclusive in the industry (patent pending). Cleanability: Smoother surface finishes provide better cleanability and sanitization.
Technical Specifications	 USP Class VI compliant FDA compliant Made from TFM™ from 3M® and Newman's premium, proprietary elastomer formulation Available in single-piece and two-piece varieties







About Newman Sanitary Gasket

Established in 1973 by owner David Newman, Newman Sanitary Gasket Company is a leading provider of O-rings, gaskets and custom-molded EPDM elastomer parts for companies serving the pharmaceutical industry and other sanitary processing industries.

Newman houses its production, shipping and storage efficiently within its 22,500 sq. ft. state-of-the-art facility. Newman is an ISO 9000 company located in Lebanon, Ohio.

For more infomation, please visit **www.newmangasket.com**.

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