

Garlock® ONE-UP®

Pump Diaphragms

Garlock® ONE-UP® pump diaphragms, containing high performance PTFE GORE® sheet on the wetted side, are a significant advancement over conventional PTFE diaphragms. Considerably stronger, with greater flex life, they provide a dramatic improvement in service life.

VALUE & BENEFITS

Long Life

- » Contains high performance, PTFE GORE® Sheet
- » Bonded to a reinforced rubber backing
- » Patented rib construction
- » Greater flex life

Versatility

- » Diaphragms work with most chemicals
- » Chemically inert & temperature resistant

Cost Savings

- » Long life means more process uptime
- » Reduced maintenance costs with less frequent product changeouts

Availability

- » Available for most brands of pumps & sizes

DURABLE VERSATILITY

Chemical resistance is the property that makes Garlock® ONE-UP® pump diaphragms so versatile. Suitable for use with most chemicals and in elevated temperatures and pressures, these diaphragms are ideally suited for those general service pumps that are likely to be put to one use today and another use tomorrow.

You can expect a long, effective service life and reduced maintenance costs with these durable one-piece diaphragms. Strength and chemical resistance make ONE-UP® pump diaphragms perfect for most of your pumping requirements.

Garlock® ONE-UP® diaphragms may be used in potentially explosive atmospheres when installed in ATEX compliant pumps. For further information, please contact your local Garlock representative.



MATERIAL PROPERTIES

Extreme Abrasives:

For increased life with in extremely tough, abrasive applications ask for the Extra Abrasive Resistant option which uses thicker GORE PTFE and increases the amount of PTFE by 57%! This option is available with most sizes however note that some larger size diaphragms already come with this option.

Temperature¹:

Neoprene Backing:

-10°F to 200°F (-23°C to 93°C)

EPDM Backing:

-40°F to 280°F (-40°C to 137°C)

Viton® Backing:

32°F to 350°F (0°C to 176°C)

Chemical Resistance:

Chemical resistance to all media in pH 0-14 range, except molten alkali metals and elemental fluorine.

Meets Specification:

FOR INDUSTRIAL USE ONLY.

Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.

GARLOCK® ONE-UP® PUMP DIAPHRAGMS

FIELD TESTING

Garlock® ONE-UP® pump diaphragms have been extensively field tested in a wide variety of industries including chemical processing, paint, solvent and detergent manufacturing, and wastewater treatment. Document case histories show that the average service life is 3.5 times longer than conventional PTFE diaphragms.

LONG SERVICE LIFE

The superiority of the PTFE technology developed by GORE® ensures that pump diaphragms will provide extended service life. Even in your most abrasive applications, the ONE-UP® will last longer.

Property	ASTM Method	Sample Dimensions (Thickness)	Conventional PTFE (Literature)	GORE PTFE (Test Data)
Flex Life (MM cycles)	ASTM D-2176	0.020 in. 0.060 in.	4.1	70+*
Impact Strength (ft lbs/in)	ASTM D-256	0.220 in.	2 - 3.5	30.4
Tensile Strength (psi)	ASTM D-638	0.220 in.	4000 - 5000	14920
Mullins Burst (psi)	ASTM D-3786	0.020 in.	180**	540
Tensile Creep (1000hr, 1000psi)	ASTM D-2990	0.100 in.	20% - 30%**	9% - 10%

Sample dimensions are given to compare conventional PTFE to Garlock's PTFE for testing purposes and do not represent actual diaphragm dimensions.

* Test was stopped over time.

** Actual test results for conventional PTFE film.

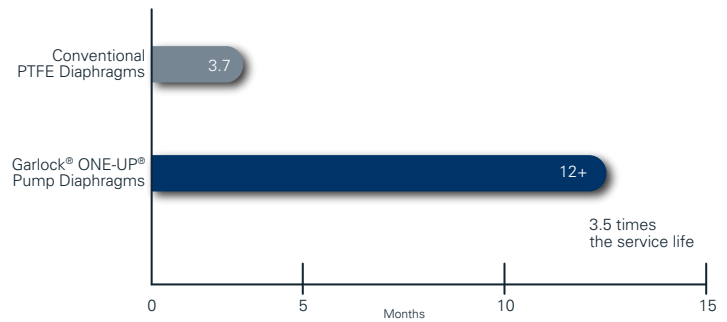
SATISFACTION GUARANTEED

We guarantee your satisfaction. If, on your initial order, you are not completely satisfied with the performance-in-use of the diaphragms, return them for a full refund of the purchase price.

1 - Diaphragm pumps and valves have unique dynamics which can greatly affect the diaphragm performance, such as but not limited to: diaphragm geometry, displacement, media and pump speed. As a result the listed temperatures are general guidelines based on mechanical stress only.

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AVERAGE SERVICE LIFE BASED ON FIELD TESTING



EASY INSTALLATION

Since the Garlock® ONE-UP® pump diaphragm is a one-piece design, it is simple to install. Whether it incorporates bolt holes or a perimeter sealing bead, it fits easily into the pump housing without the difficulties associated with installing two-piece diaphragm sets.



AVAILABILITY

Garlock® ONE-UP® pump diaphragms are available for the following makes of air operated diaphragm pumps:

- | | |
|--------------|---------------|
| » ALMATEC | » UNITEC |
| » ARO | » VERDER |
| » DEPA | » VERSAMATIC |
| » BLAGDON | » WARREN RUPP |
| » FLOTRONICS | » WILDEN |
| » GRACO | » YAMADA |

WARNING:

Properties/applications shown throughout this brochure are typical. Your specific application should not be undertaken without independent study and evaluation for suitability. For specific application recommendations consult Garlock. Failure to select the proper sealing products could result in property damage and/or serious personal injury.

Performance data published in this brochure has been developed from field testing, customer field reports and/or in-house testing.

While the utmost care has been used in compiling this brochure, we assume no responsibility for errors. Specifications subject to change without notice. This edition cancels all previous issues. Subject to change without notice.

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