

JORLON DIAPHRAGM



UNPARALLELED PERFORMANCE
UNPARALLELED RELIABILITY



3170 Wasson Road | Cincinnati, OH 45209 USA
513.533.5600 | 513.871.0105 (f) | lowflow@richardsind.com
LowFlowValve.com

WHAT IS JORLON?

Jorlon is structurally modified pure PTFE. It is manufactured by a proprietary technique where PTFE layers are combined and formed in a unique process to reduce the creep and cold flow associated with conventionally form solid or laminated PTFE or Teflon.

A table of physical properties and compliance facts is available below.

LowFlow Valve warrants the Jorlon™ diaphragm on the following series:

- JR Series
- JB Series
- JRH Series
- JRHF Series
- JRLL Series
- JRHL Series

for a lifetime of use on all clean utility or process applications at continuous operating pressure, temperature and conditions as specified in each model's data sheet.

Physical Properties of Jorlon		
Color		Clear, translucent
Composition		PTFE
Temperature	Minimum/Maximum	Min -350°F (-212°C) to Max 500°F (260°C)
Creep relaxation (ASTM F38)	%	35
Specific Gravity (D792)		2.19
Compressibility (ASTM F36)	% Range	20 - 25
Recovery (ASTM F36)	Min %	50
Tensile Strength (ASTM D1708)		
X Direction	psi (N/mm ²)	5000 (35)
Y Direction	psi (N/mm ²)	5100 (36)
Ultimate Elongation (ASTM D1708)		
X Direction	%	500
Y Direction	%	520
Gas Permeability (ASTM D1434V)	CC/M ² /24 hrs	10,000
Flammability		Will not burn



Lifetime Warranty

Jorlon is warranted for a lifetime of use on our JR Series, JB Series, JRH Series, JRFH Series, JRL Series, and JRHL Series regulators.

Product Applications

Jorlon has extremely long life cycles. It provides superior accuracy, while maintaining excellent pressure/temperature and chemical capabilities.

Improved Performance

Stainless Steel diaphragms are rigid by nature, thus have decreased sensitivity. The Jorlon material approaches the droop performance seen in true elastomer diaphragms resulting in greater set point accuracy.

Cycle Testing

Jorlon has been tested on a variety of LowFlow regulators on 45 psig (3 bar) continuous steam service to over 1 million full stroke cycles.

Lab Testing

Lab tests comparing Jorlon to 316L diaphragms have shown continued life after exceeding the SST failure cycle count by more than 100 times.

Jorlon Material

Jorlon has been used by LowFlow for over 9 years. To date, not one valve has been returned due to diaphragm failure when operating within its use parameters. Jorlon has been nitrogen pressure tested to over 1200 psi without failure.

JORLON WARRANTY

LowFlow, a division of Richards Industrials, warrants the Jorlon diaphragm for use on all of its gas regulators as defined:

- J-Series Gas Regulators: Models JR, JB, JRH, JRHF, JRLL, and JRHL Series

All are warranted for a lifetime¹ of use on all clean utility or process applications at continuous operating pressures, temperature and conditions as specified in each model's data sheet.

1. A lifetime of use is defined as the period during which the warranted diaphragm resides in the original valve and original installation. If the warranted valve is ever replaced or moved to a different installation, or is not used for a period of more than one year (not counting original installation, commissioning, qualification and/or validation period), the original diaphragm warranty is void.
2. Because of the wide variety of specialty gases available today, LowFlow warrants its use on the most commonly used gases such as Nitrogen, Oxygen, Carbon Dioxide, and Argon. It is not warranted without LowFlow Engineering's written approval on any other gas. Contact LowFlow for details. The diaphragm warranty is void on these other gas applications without our express, written approval.

Remedy

If the original Jorlon diaphragm fails on any of the valves listed above at any time within the limitations stated above, LowFlow will replace that diaphragm at no charge. This includes any UPS Next Day expedited freight charges for the replacement diaphragm and associated documentation.

Exclusions

- This warranty and associated remedy does not cover diaphragm that were damaged due to customer mishandling, misapplication or neglect.
- LowFlow reserves the right to inspect a failed diaphragm before the application of remedy, to determine cause of failure.
- LowFlow does not make provisions to cover any other costs incurred as a result of diaphragm failure including (but not limited to any labor, capital, operating costs, or lost profits due to a diaphragm failure.

This particular remedy is an addendum to the LowFlow Valve, a division of Richards Industrials' standard commercial warranty, and terms and conditions. No other remedies apply.