VICI TEFLON[™] AF PLANAR DEGASSERS MODEL 403 SERIES

VICI METRONICS

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DESCRIPTION

Degasssers from VICI[®] Metronics remove up to 94% of gas present, improving purity, quality, and the accuracy of analysis. Formerly from Random Technologies, Inc., VICI Metronics planar degassers benefit from years of development, production experience, and field use to offer customers reliable performance for even the most sensitive applications. What makes our degassers exceptionally effective is Teflon[™] AF (amorphous fluoropolymer) film, which is 2 orders of magnitude higher than PTFE or other materials.

The Model 403 Series uses an AF membrane sandwiched between a flow channel and a vacuum plate. This results in far greater degassing efficiencies as the eluent flows across the large surface area of the flow plate. In the case of a dual film degasser, a second pass is made over the flow plate, providing a large interaction area and extremely efficient degassing.





FEATURES

Individually serialized for lot and batch traceability | Performance tested at stated specifications for pressure, vacuum and degassing efficiency



BENEFITS

Superior bubble removal | Faster pull-down time | Seal that is unaffected by hexane and other normal phase solvents | Only two liquid contact materials: PEEK and Teflon[™] AF | No internal fittings or connections | Extremely high purity polymer | No ghost peaks | Reduction in dead volume by up to 12 mL

ABOUT TEFLON AF

Teflon[™] AF (amorphous fluoropolymer) resins have more permeability and improved mechanical properties compared to amorphous polymers. These resins also perform well over a wide range of compatible eluents and maintain outstanding chemical resistance. A unique chemical structure enhances their versatility and distinguishes this class from other fluoropolymers.

DATA COMPARISON

VICI 403 series planar degassers are a cost effective replacement for degassers which use tubular Teflon[™] AF 2400. Since pump cavitation becomes more serious at higher flow rates, it is advantageous that the degassing efficiency curves of the planar degassers are flatter than those of degassers based on a tubular degassing membrane.

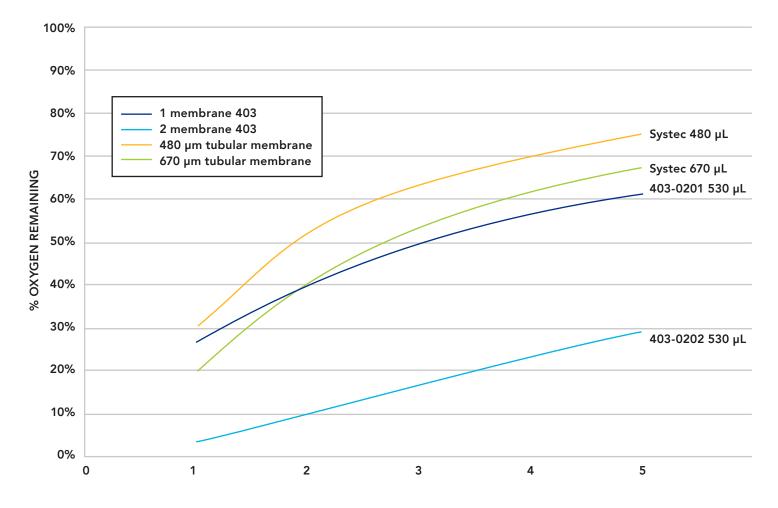
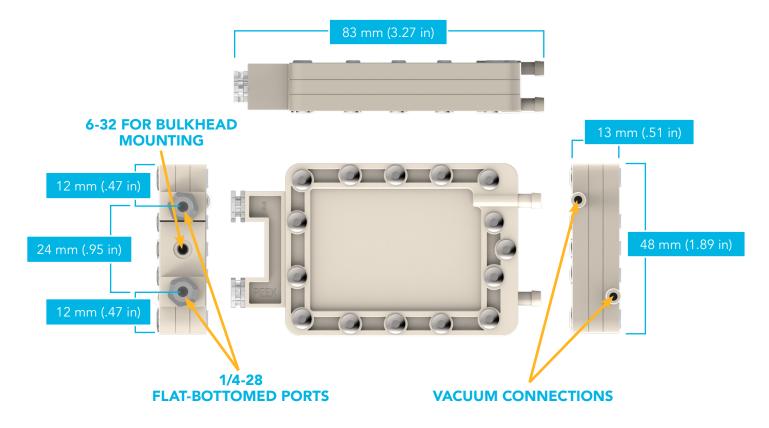


FIGURE 1: DEGASSING EFFICIENCY IN METHANOL

Figure 1 shows the range of degassing efficiencies available from a series of Model 403 vacuum degassing chambers. All of these results are from the same degasser body having a dead volume of 530 microliters. The different efficiencies result from changes in the membrane configuration and do not involve any change in backpressure or pressure drop across the degasser. The curves are labeled with each model's part number.

- P/N 403-0202 dual membrane degasser removes up to 94% of gas at a flow rate of 1 mL/min
- P/N 403-0202 dual membrane degasser removes up to 70% of gas at a flow rate of 5 mL/min
- P/N 403-0201 single membrane degasser removes up to 80% of gas at a flow rate of 1 mL/min
- P/N 403-0201 single membrane degasser removes up to 40% of gasat a flow rate of 5 mL/min

DIMENSIONS



| SPECIFICATIONS | PLANAR DEGASSERS |
|---|--|
| Wetted Materials | PEEK®, Teflon™ AF 2400 |
| Maximum Working Pressure | 3.45 barg (50 psig) |
| Liquid Connections | 1/4-28 flat bottom ports |
| Vacuum Connections | Hose barb for 3mm (1/8 in) ID tube |
| Dead Volume | 533 μL |
| Size | 83 mm x 48 mm x 13 mm (3.25 in x 1.88 in x .52 in) |
| Vacuum Seal | <34 mbar (3.3 kpa) leak in 10 min |
| Pressure Test | 335 kPa internal pressure, 95 kPa applied vacuum |
| Actual Pressure Drop (average) at 1 mL/min water | <3 mbar (274 Pa) with vacuum applied |

ADDITIONAL INFORMATION

Typical molding temperatures for Teflon[™] AF 2400 is from 340-360°C (644-680°F). VICI Metronics also fabricates custom Teflon[™] AF 2400 Products. **Contact sales@vicimetronics.com to request products and** <u>components made from Teflon AF.</u>