Ultramet-L®
4281, 4581 Series Assembly

Data Sheet MEUL481EN

Description

The Ultramet-L® 4281/4581 Series Filter Assemblies are available with an all 316L stainless steel housing and either a 316L stainless steel or nickel filter. They are designed for ≥ 3 nanometer (0.003 µm) filtration of semiconductor grade gases. The 4281/4581 series filters are recommended for all applications with process gases that are compatible with 316L stainless steel or nickel. For applications with corrosive gases, such as halogen containing acid gases, the nickel filter assembly is recommended only if the gas is known to be anhydrous.

Features & Benefits

- State-of-the-art 316L stainless steel or nickel media
- Excellent particle removal efficiency vs. pressure drop
- Accommodates extremely high flow rates for the assembly size
- Excellent gas displacement and desorption characteristics
- High temperature and pressure capabilities
- Compact size for ease of installation
- Wide variety of fitting options available
- 100% helium leak tested
- Cleanroom manufactured and packaged
- Housing material meets or exceeds VIM VAR specifications

Specifications

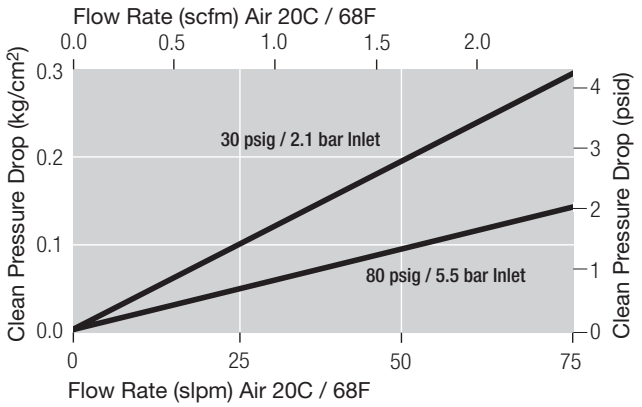
Filter Medium	316L stainless steel or nickel
Internal Surface Finish	10 µin / 0.25 µm R_a
Housing	Electropolished 316L stainless steel Housing material meets or exceeds typical VIM VAR specifications
Removal Rating	≥ 3 nm
Particle Removal Characteristics	4281 series: 10^9 particle reduction up to 6 slpm / 0.2 scfm 10^4 particle reduction up to 75 slpm / 2.6 scfm
	4581 series: 10^9 particle reduction up to 50 slpm / 1.76 scfm
Connections	¼" Gasket Seal, male (VCR[1] or compatible)
	Other fitting configurations available, please contact Pall

Leak Rating	100% helium leak tested to 10^{-9} atm·cm³/sec
	Design validated to 10^{-11} atm·cm³/sec
Maximum Operating Pressure	3,000 psig @ 100 °F / 207 bar @ 38 °C; 1,685 psig @ 840 °F / 116 bar @ 450 °C
Maximum Allowable Differential Pressure	125 psid @ 100 °F / 8.6 bar @ 38 °C; 60 psid @ 840 °F / 4.1 bar @ 450 °C
EU pressure equipment directive	Assemblies have been evaluated and are CE marked per the European Union's Pressure Equipment Directive 2014/68/EU

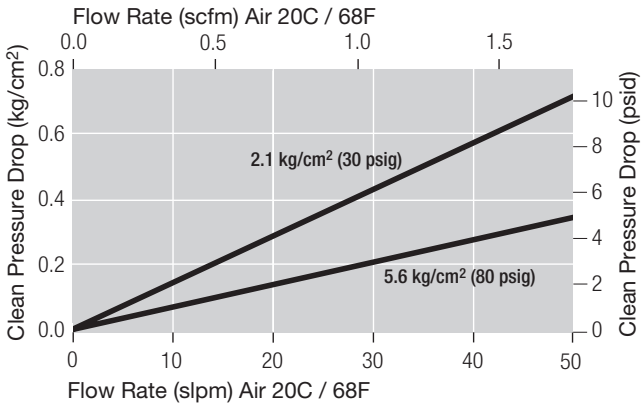
[1] VCR is a trademark of Swagelok Co.

Pressure Drop vs. Gas Flow Rate

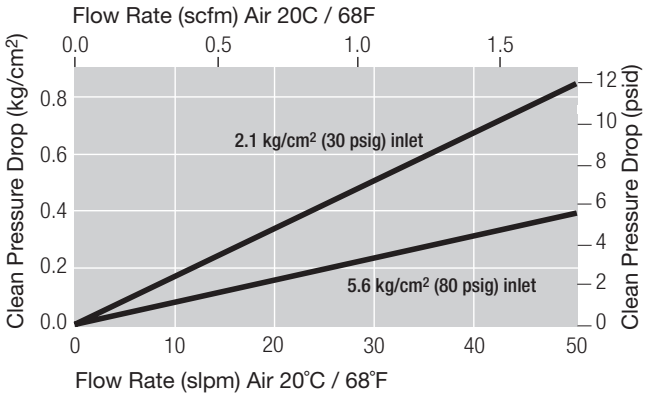
GLFF4281VMM4



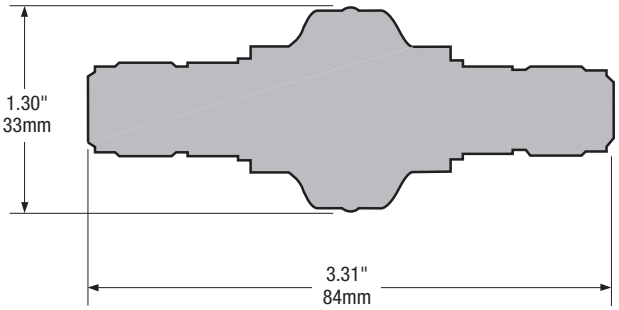
GLFF4581VMM4



GLFN4581VMM4



Dimensions



Part Numbers / Ordering Information

Part Number	Description	Fitting Type
GLFF4281VMM4	All Stainless Steel	¼" Gasket Seal (VCR or Compatible) Male / Male
GLFF4581VMM4	All Stainless Steel	¼" Gasket Seal (VCR or Compatible) Male / Male
GLFN4581VMM4	Nickel Media, 316L Stainless Steel Housing	¼" Gasket Seal (VCR or Compatible) Male / Male

Unit conversion: 1 kilogram per square centimeter = 98.067 kilopascals

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IF APPLICABLE Please contact Pall Corporation to verify that the product conforms to your national legislation and/or regional regulatory requirements for water and food contact use.