

Ultramet-L® 4581 Series Assembly (1.5 nm)



Data Sheet MEUL4581EN

Description

The Ultramet-L® 4581 Series Filter Assemblies are available with an all 316L stainless steel housing and 316L stainless steel filter. They are designed for ≥ 1.5 nanometer ($0.0015 \mu\text{m}$) filtration of semiconductor grade gases. The 4581 series filters are recommended for all applications with process gases that are compatible with 316L stainless steel.

Features & Benefits

- State-of-the-art 316L stainless steel 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

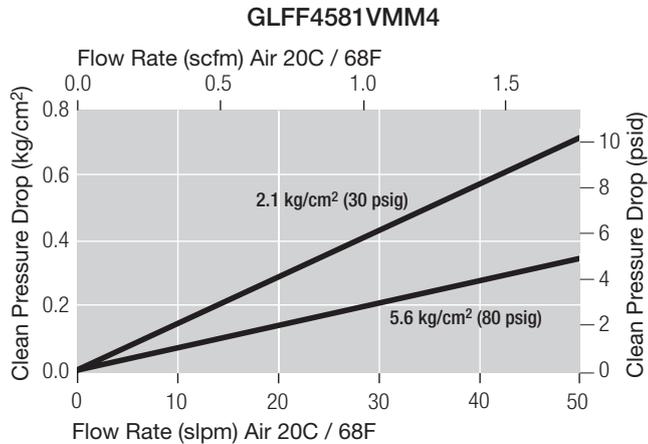
Filter Medium	316L stainless steel
Internal Surface Finish	$10 \mu\text{in} / 0.25 \mu\text{m R}_a$
Housing	Electropolished 316L stainless steel Housing material meets or exceeds typical VIM VAR specifications
Removal Rating	$\geq 1.5 \text{ nm}$
Particle Removal Characteristics¹	10^9 particle reduction up to 50 slpm / 1.76 scfm
Connections	$\frac{1}{4}$ " Gasket Seal, male (VCR ² or compatible)

Leak Rating	100% helium leak tested to $10^{-9} \text{ atm}\cdot\text{cm}^3/\text{sec}$ Design validated to $10^{-11} \text{ atm}\cdot\text{cm}^3/\text{sec}$
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

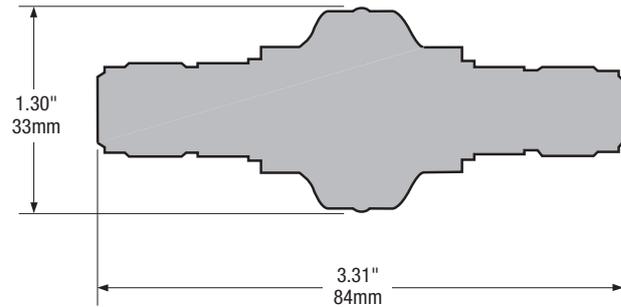
¹ Referenced at most penetrating particle size

² VCR is a trademark of Swagelok Co.

Pressure Drop vs. Gas Flow Rate



Dimensions



Part Numbers / Ordering Information

Part Number	Description	Fitting Type
GLFF4581VMM4	All Stainless Steel	¼" Gasket Seal (VCR or Compatible) Male / Male

Unit conversion: 1 kilogram per square centimeter = 98.067 kilopascals