

Ultramet-L[®] 4000 Series Filter Assembly (1.5 nm)



Data Sheet MEUL40ENa

Description

The Ultramet-L[®] 4000 Series Filter Assembly is a unique, all 316L stainless steel filter designed for ≥ 1.5 nanometer ($0.0015 \mu\text{m}$) filtration of semiconductor process gases.

Features & Benefits

- All 316L stainless steel construction
- 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



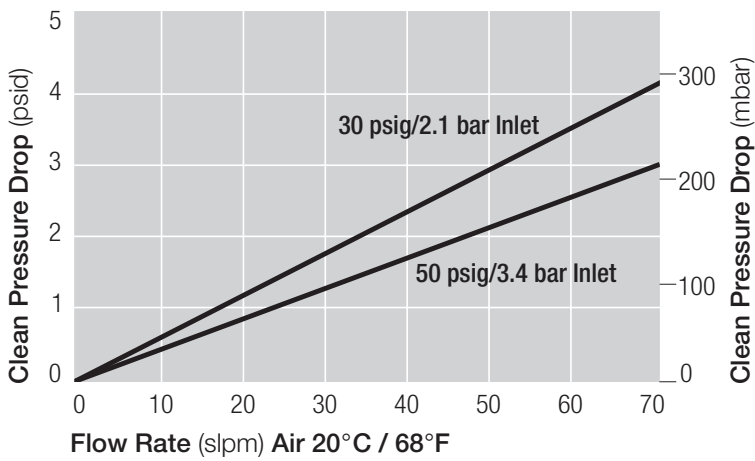
Specifications

Filter Medium	316L stainless steel
Internal Surface Finish	$\leq 7 \mu\text{in} / 0.18 \mu\text{m R}_a$
Housing	Electropolished 316L stainless steel Housing material meets or exceeds VIM / VAR specifications
Removal Rating	$\geq 1.5 \text{ nm}$
Particle Removal Characteristics	10^9 particle reduction up to 6 slpm / 0.2 scfm 10^4 particle reduction up to 75 slpm / 2.6 scfm
Connections	$\frac{1}{4}$ ", $\frac{1}{2}$ " Gasket Seal, Male / Male (VCR ¹ or compatible) $\frac{1}{4}$ " Compression Seal, Male / Male (Swagelok ¹ or compatible) $\frac{1}{4}$ " Butt Weld (0.035" / 0.89 mm wall)

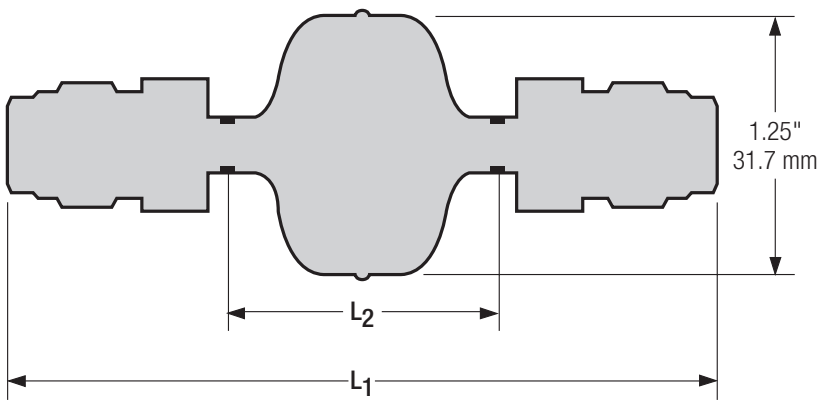
Leak Rating	100% helium leak tested to $10^{-9} \text{ atm}\cdot\text{cc/s}$ Design validated to $10^{-11} \text{ atm}\cdot\text{cm}^3/\text{s}$
Maximum Operating Pressure	207 bar @ 38 °C / 3000 psig @ 100 °F 116 bar @ 450 °C / 1685 psig @ 840 °F
Maximum Allowable Differential Pressure	8.6 bar @ 38 °C / 125 psid @ 100 °F 4.1 bar @ 450 °C / 60 psid @ 840 °F
EU Pressure Equipment Directive	Assemblies have been evaluated and designed using SEP per the European Union's Pressure Equipment Directive 2014/68/EU and are not CE marked.

¹ VCR and Swagelok are trademarks of Swagelok Co.

Pressure Drop vs. Gas Flow Rate



Dimensions



Part Numbers / Ordering Information

Part Number	Description	Length (L) (in / mm)
GLFF4000VM4	¼" Gasket Seal (VCR or Compatible) Male / Male	3.31 / 84 (L ₁)
GLFF4000SM4	¼" Compression Seal (Swagelok or Compatible) Male / Male	2.88 / 73 (L ₁)
GLFF4000BW4	¼" Butt Weld, 0.035" / 0.89 mm wall	1.75 / 45 (L ₂)
GLFF4000VMM8	½" Gasket Seal (VCR or Compatible) Male / Male	3.35 / 85 (L ₁)

Unit conversion: 1 bar = 100 kilopascals